CEO successor origins, top management team faultline, and strategic change—empirical evidence from China

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A B S T R A C T

Building on the upper echelons theory and demographic faultline theory, this paper investigates the role of the top management team (TMT) faultline as a mediator and explores the moderating effect of CEO power as an important contextual factor. We utilize a sample of A-share listed companies on the Shanghai and Shenzhen Stock Exchanges from 2009 to 2020. Our findings show that outside CEO successors are significantly and positively related to corporate strategic change. TMT faultline mediates the effect of CEO successor origins on corporate strategic change, while CEO power reinforces the relationship between the two. Heterogeneity tests reveal that the effect of outside CEO successors on strategic change is insignificant in state-owned enterprises (SOEs) but has a significant impact on firms at their growth and maturity stages. Furthermore, our findings suggest that outside CEO successors inhibit the positive role of strategic change in promoting firm value.

1. Introduction

Strategic alignment with the external environment constitutes the fundamental pillar of a firm's success in an intensely competitive business landscape [1]. To sustain and augment their competitive advantage, companies need to proactively initiate strategic changes that enable them to dynamically match the changing external environment [2]. Despite the widely acknowledged importance of strategic change for corporate survival and competitive advantages [3], not all firms manage to effectively realign their strategies with the dynamic external environment in a timely manner, with some even exhibiting typical strategic inertia. Particularly, the prevalence of the Chinese entrepreneurial mindset of "waiting for death without changes, or dying faster from changes" in recent years highlights the challenges of strategic change in highly dynamic environments and underscores the significance of understanding the determinants and effective initiation and implementation of strategic change to ensure firm/environment fit. As such, inquiries into these issues have

emerged as central concerns of the strategic management community [4].

Upper echelons theory postulates that top executives, especially CEOs, are not only the actual driver and implementers of strategic change in the firm but also the key catalyst for organizational change, dominating and shaping corporate strategic changes [5]. Changes in the CEO and the top management usually lead to changes in the company's capability to respond to environmental changes, disrupting the power structure within the organization and impacting the initiation and implementation of established strategies. The relationship between CEO turnover and strategic change has gained considerable scholarly attention and exploration over the past decades [6], largely rooted in an important theoretical perspective that leaders, especially CEOs, coordinate strategy formulation and set the organizational context [7]. As the helmsman of a company, the CEO is the most unique and competitive human capital, steering its direction and shouldering its mission, whose importance is self-evident [3,8]. As a major participant in corporate governance, the CEO plays an unparalleled role in the firm, and CEO turnover directly affects the effectiveness of corporate governance, which in turn affects strategic change and firm performance. Moreover, the new CEO is a crucial source of power for promoting corporate governance structure and purposefully reconfigures the top management team (TMT) [9], bringing about strategic change and ultimately achieving corporate goals. CEO turnover inevitably triggers the re-composition of TMTs, leading to convergences and conflicts between different subgroups, changes in organizational strategic capabilities, and shifts in strategic objectives, ultimately impacting corporate long-term growth and strategic stability. The increasing trend of global CEO turnover events highlights firms' expectations to trigger changes in leadership changes to bring about strategic changes [10].

However, there is a lack of consensus in research regarding what origin of CEO successors is more likely to initiate strategic change. The prevailing belief that an external CEO is more inclined to pursue strategic change finds support in empirical studies [11,12]. This perspective suggests that external CEO successors are mandated to bring about strategic change and are expected to introduce fresh perspectives, novel knowledge, and skills that facilitate the initiation of strategic change [12]. Nevertheless, alternative viewpoints posit that external successors face disadvantages in terms of firm-specific knowledge and internal support for instigating strategic change [13] and encounter resistance and challenges from the remaining top management teams, all of which may impede their strategic change efforts. A study conducted on Chinese listed firms supports this perspective, as Shang et al. [14] discover that external CEO successors tend to hinder strategic change, but those with government experience are more likely to drive strategic change. This study highlights that the impact of CEO successor origins on strategic change undergoes a fundamental transformation when considering the characteristics of CEO successors. As successors, the individual attributes of CEOs exert a significant influence on corporate strategic choices [15]. Concurrently, CEO turnover typically triggers an additional evolution in TMT heterogeneity and affects strategic decisions, including the selection of business models, within the organization. Thus, the influence of different CEO successors on the dynamics of TMT attributes emerges as another critical factor in shaping corporate strategic change. Indeed, it is unrealistic to expect any individual, including the CEO, to possess complete dominance over the strategic transformation of a firm. TMTs, as cohesive entities, play a vital role in shaping organizational perceptions, identifying opportunities, resolving issues, and facilitating critical strategic decisions [16]. Changes in the CEO, as a pivotal variable with the TMT, hold the potential to substantially reshape its structure and perceptions, thereby exerting a significant impact on the effectiveness of corporate strategic change [17]. By scrutinizing CEO turnover and the subsequent alterations in attributes of the TMT, it is possible to augment the interpretation of strategic change with enhanced effectiveness and scientific rigor.

Strategic choice and upper echelons theories propose that team heterogeneity in TMT demographics such as gender, age, education, functional background, and tenure wields a pivotal impact on corporate strategic perceptions and choices, thereby shaping strategic decisions and ultimately influencing firm performance [18]. However, while team heterogeneity primarily examines the distribution of demographic attributes among team members and focuses on the role of individuals within the team, team diversity explores how individual demographic attributes influence team dynamics and structure. Nonetheless, team diversity overlooks the alignment effects that arise from multiple attributes. To address these limitations, Lau and Murnighan [19] introduce the concept of team faultline, which elucidates the process of subgroup formation where relative homogeneity is observed within groups but relative heterogeneity exists between groups based on the multidimensional attributes of their members. By building upon team diversity research, team faultline offers a more conceptually accurate framework for understanding subgroup dynamics and demonstrates a more pronounced impact on team outcomes compared to team heterogeneity [20]. Team faultline reveals the structural concerns associated with team heterogeneity and addresses the limitations inherent in using a single demographic attribute as a measure of team heterogeneity and diversity. Furthermore, it sheds light on the holistic impact that arises from the integration of diverse attributes possessed by team members through their interactions. These holistic interactions yield greater effects than the isolated influences of individual attributes and provide insights into the intricacies of cooperative challenges within team functioning. Hence, The concept of team faultline has been identified as one of the most effective ways to describe and depict the interplay of diverse characteristics within teams. Building on this, we propose that the TMT faultline serves as an intrinsic mechanism through which different origins of CEO successors initiate strategic change.

CEO turnover signifies a reconfiguration of power dynamics within an organization. CEO power encompasses an individual's capacity to leverage their skills and influence the behavior of others or the organization to attain predefined objectives [21]. Given that the CEO serves as the primary strategic decision-maker [18], most existing studies implicitly assume that the new CEO possesses sufficient power to initiate strategic change [6], leading to limited exploration of the relationship between CEO power and strategic change [22]. Despite some scholars exploring the influence of CEO power on firm behavior, such investigations have primarily focused on developed economies like the United States, predominantly examining task environments or industry characteristics that generate managerial discretion. With only a small body of literature available [23], limited research has explored the moderating effect of CEO power on the relationship between CEO successors of different origins and corporate strategic change within the context of CEO turnover and there is a notable dearth of studies conducted from the perspective of CEO transitions in Chinese listed companies. In a

CEO turnover scenario, CEO successors from different origins tend to bring about varying degrees of restructuring within TMTs, influencing the power dynamics among TMT members and triggering the reconfiguration of subgroups within TMTs [24], which subsequently impacts the firm's capacity and strategic trajectory through alterations in the TMT faultline [23]. Then, how does CEO power affect the TMT faultline, and how does CEO power influence different origins of CEO successors to take on strategic change?

This paper, therefore, aims to empirically examine the impact of CEO successors from different origins on strategic change using a sample of Chinese A-share listed firms from 2009 to 2020. Moreover, it introduces the TMT faultline as a mediating variable to investigate the inherent mechanism through which different origins of CEO successors drive strategic change by reshaping the composition of TMTs. The study also explores the moderating effect of CEO power on the relationship between CEO successor origins and strategic change, as well as its direct influence on the TMT faultline. Additionally, this research explores the heterogeneous effects among firms with varying property rights and at different life cycle stages and further investigates the association between CEO successor origins, strategic change, and firm value.

The main contribution of this paper is to enhance our understanding of TMT composition by drawing insights from the upper echelons and demographic faultline literature. This not only offers new perspectives and pathways to explore the impact of CEO turnover on strategic change but also sheds light on the "black box" of TMT theory and enriches the academic literature on CEO turnover, team faultline, team composition, and strategic change. Firstly, by highlighting the role of CEO turnover in enabling TMT reconfiguration, this research provides a dynamic context for studying the TMT faultline, which goes beyond the static contexts examined in previous faultline studies. Secondly, the paper presents a more detailed theoretical model that elucidates how the origins of CEO successors influence corporate strategic change through the TMT faultline. It uncovers the underlying mechanism through which different CEO successors impact strategic change by reshaping the composition of the TMT. This addresses the relatively underexplored area of how TMT subgroups (represented by the faultline) influence strategic decision-making, contributing to the broader research on the factors influencing strategic change and the mechanisms of the TMT faultline. Thirdly, CEOs and TMTs face immense pressure from rapid and significant global socio-economic changes, compelling them to swiftly and effectively initiate strategic actions in a highly dynamic environment. The mediating role of the TMT faultline between CEO successor origins and strategic change, as well as the influence of CEO power on the TMT faultline, provide empirical evidence for further investigation into the drivers and outcomes of the TMT faultline. Fourthly, changes in CEO power necessitate CEOs and TMT members to consider a wide range of options for aligning their strategies with the firm's environmental demands, enriching the contingency perspective of strategic change research. Lastly, this study sheds light on the mediating effects of the TMT faultline between CEO successor origins and strategic change, offering valuable insights and implications for emerging economies to enhance their governance practices. The findings validate these issues in the context of Chinese management, enabling the establishment of a strategic alignment between CEO successor origins and TMT's choices regarding strategic change. Additionally, it clarifies the stabilization process of TMTs in different types of CEO succession scenarios, emphasizing the importance for boards of directors to make CEO selection decisions or grooming plans that consider strategic change and the alignment of the company's future strategic direction.

2. Theory and hypotheses

2.1. The direct effect of CEO successor origins on strategic change

Changes in the internal and external organizational environment play a crucial role in influencing strategic change and organizational performance. Notably, one of the significant disruptions in corporate development arises from changes in organizational leadership resulting from CEO turnovers. Extant research has demonstrated the criticality of CEO turnovers as key drivers of corporate strategy and performance, with CEOs serving as pivotal decision-makers in production and operations [3]. Moreover, the origin of CEO successors serves as a significant indicator of changes within the organizational environment, exerting a substantial impact on the post-succession strategic changes [25–27]. Previous studies have predominantly attributed the drivers of strategic change triggered by CEO turnovers to cognitive psychology, highlighting cognitive differences between incoming and outgoing CEOs, as well as variations in their levels of psychological commitment to their firms' previous behaviors and strategies [28,29]. The cognitive psychology perspective argues that successors are more inclined to initiate strategic change to realign their firms with the prevailing environment compared to outgoing incumbents.

Previous studies have consistently categorized CEO successors into insiders and outsiders, depending on whether they held full-time executive positions within the focal firm prior to their succession [30]. However, findings are inconsistent as to what origin of CEO successors is more likely to trigger corporate strategic change. Generally, it is believed that external CEO successors are more prone to strategic changes following succession [31]. Unlike internal CEO successions, external CEO successions occur more frequently when the organization's operational performance declines or when corporate irregularities are revealed, leading the board to conclude that there is no qualified internal candidate for succession. In such cases, the appointment of an external CEO is motivated by the need for strategic change [27]. Moreover, most external CEO successors are professional managers, who are subject to more stringent supervision by the board of directors and under greater pressure to improve firm performance in response to board evaluations and the potential early exit threat, which impacts their professional reputation and career progression, thus exhibiting greater likelihood to initiate strategic change than their internal counterparts [32]. Additionally, external CEO successors bring in idiosyncratic experiences and external resources as outsiders. These unique experiences provide novel perspectives, knowledge, and skills that are often scarce within the firm and their newly acquired personal social networks and external resources assist in quickly developing or transforming organizational capabilities, thereby facilitating strategic change [12]. Furthermore, external successors are more likely to make sweeping changes since they are not personally invested in the established strategies and decisions and are not emotionally connected

to the original TMT members.

Based on the above analysis, we propose.

H1. In the scenario of CEO turnover, an outside CEO successor is more likely to initiate strategic change than an inside CEO successor.

2.2. The mediating effect of the TMT faultline

TMTs collectively shoulder operational management responsibilities within the organization, and their composition significantly influences the decision-making processes and changes in TMT composition play a pivotal role in driving corporate strategic change [18]. Newly appointed CEOs, particularly those external to the company, often embark on deliberate adjustments and changes to their TMT at the outset of their tenure [9], and restructuring TMTs proves to be an effective means for new CEOs to instigate strategic change [6]. As previously discussed, we employ the concept of team faultline, which is deemed highly influential in capturing the amalgamation of diverse attributes within teams, to portray TMT restructuring. We perceive the TMT faultline as a crucial pathway and intrinsic mechanism for new CEOs to initiate strategic change.

Demographic faultline theory extends the application of the team faultline concept to the TMT research context at the organizational level [33,34] and examines the impact of specific constituent attributes or combinations of attributes that contribute to internal differentiation within teams, aiming to explore more intricate patterns of team composition from a multi-attribute perspective. It highlights the significant influence of the interplay between multiple demographic attributes on the emergence of subgroups within TMTs [35] and suggests that when multiple demographic attributes simultaneously shape subgroup formation, the combination of these attributes can potentially divide the team into conflicting subgroups and compromise the quality of team decision-making [20]. It adopts a combinatorial perspective to analyze the diversity and arrangement of attributes among team members and specifically focuses on identifying patterns and configurations of multiple attributes, thereby going beyond the examination of individual attributes and allowing for the study of interrelationships between multiple attributes within the team [36].

Research on the influencing factors of the TMT faultline mainly includes team performance, team satisfaction, cluster conflict, team output, team learning, team identity, information processing, resource integration, etc. There is little research on behavioral performance, such as strategy selection, decision execution, and resource allocation. Much research argues demographic faultlines as an antecedent variable may lead to a lack of team functioning and failure to achieve its potential [37], with some negative effects such as reduced team performance, team output, team creativity, team morale, psychological security, team cohesion and consensus, team decision-making, innovation performance, and increasing intergroup conflicts. We, therefore, propose a negative association between the TMT faultline and strategic change.

CEO turnovers give rise to heightened conflicts of interest, competition, and internal conflicts within TMTs. The origins of CEO successors yield distinct outcomes in terms of power dynamics within the organization, while the reconfiguration of power prompts the firm to undertake necessary restructuring of the TMT. In contrast to insider succession, outsider succession often entails more extensive restructuring of TMTs. As previous CEOs depart, their followers may opt to leave voluntarily due to conflicting strategic perspectives, disillusionment stemming from power struggles, or unmet expectations for career advancement. Faced with the inherent disadvantages of being an outsider and the mandate for change, external CEO successors purposefully modify the composition of their TMTs to align with their post-succession strategic objectives. They strategically select and promote former TMT members who share their strategic goals and possess similar attributes while excluding those who may challenge their authority. This deliberate reshaping of TMTs allows external CEOs to foster better integration within the organization, gain the support of the board and other TMT members, and further their strategic aspirations. Moreover, when external CEOs assume leadership, they often bring in diverse talents to ensure a strong alignment between the new TMTs and their strategic objectives. The restructured TMTs comprise the external CEO, former TMT members, and new additions to the team. Given the intricate composition of TMTs and the diverse attributes of their members, it is inevitable that distinct subgroups form, creating the potential for the emergence of the TMT faultline. However, the TMT faultline is a complex outcome influenced by various factors, including team structure, team interaction, and the social and cognitive integration of team members, with its magnitude determined by the intra-group similarity and the inter-group variability between subgroups. In the context of an external CEO succession, the newly formed TMT faces a similar imperative as the CEO to enact strategic change aimed at enhancing corporate performance, making strategic change a shared objective for the entire TMT. While external CEO succession typically triggers significant TMT reorganization, the newly established TMT, comprising diverse talents with expertise and novel skills, is highly task-oriented. The subgroups within the TMT actively foster communication and promote the integration of their social relationships, both within and between the subgroups, to facilitate the pursuit of the common goal of strategic change. Consequently, this concerted effort diminishes the likelihood of the TMT faultline. Additionally, during the process of cognitive integration among TMT members, conflicts and contradictions often arise due to individual cognitive differences, leading to task conflicts. However, cognitive integration also encompasses reflection and learning, which can yield positive integration effects. Consequently, when TMT members prioritize leveraging the knowledge backgrounds of their respective subgroups to access diverse information and decision-making foundations, the TMT can fully integrate information and effectively harness the benefits of TMT diversity. The true potential of TMT diversity is actualized through intra-subgroup aggregation and inter-subgroup collaboration, resulting in a diminished magnitude of the TMT faultline. This aligns with the perspective of information processing theory, which maintains that diverse teams possess a wealth of task-related knowledge, skills, and abilities. Through cognitive integration, TMT members with distinct attributes address the challenges arising from TMT heterogeneity, such as disagreement and mutual suppression. This integration fosters increased information exchange among subgroups, expanding the team's information network and enhancing the likelihood of generating effective solution proposals. Consequently, it aids in facilitating TMTs' handling of complex tasks and improving overall

team behavioral performance [38]. Furthermore, during the initial stages of external CEO succession, the outsider disadvantage results in a smaller power disparity between the incoming CEO and other TMT members. This dynamic tends to foster an atmosphere of equality, harmony, openness, and inclusivity within the TMT, thereby promoting social interaction among subgroups [39] and diminishing the magnitude of the TMT faultline. Meanwhile, the presence of subgroups within the team fosters psychological safety among its members, empowering them to confidently express their perspectives and contribute relevant specialized knowledge from various task-related perspectives. This active communication and knowledge exchange between subgroups, facilitated by cognitive integration, serve to diminish disparities among subgroups and increase the likelihood of initiating strategic change within the organization [34]. The joint effect of the above factors and the idiosyncratic experience and external resources of external CEO successors as outsiders lead us to the following hypothesis.

H2. In the CEO turnover scenario, the TMT faultline mediates between CEO successor origins and strategic change. Specifically, external CEO successors enhance the likelihood of strategic change by reducing the TMT faultline.

2.3. The role of CEO power played in the scenario of CEO turnover

The transition of CEOs invariably engenders power struggles and structural reorganization within TMTs, resulting in the emergence of distinct subgroups and contributing to the formation of the TMT faultline. The power dynamics within TMTs play a significant role in the creation of TMT faultlines and subgroups. Social Hierarchy theory posits that power offers numerous advantages, making individuals generally strive for higher positions of power [40]. On one hand, individuals in positions of high power are compelled to sustain their power by achieving superior team performance. In order to enhance their teams' information sources and knowledge base, these high-powered individuals often recruit members from diverse backgrounds, thereby creating the objective conditions for the formation of faultlines. On the other hand, in teams with a more centralized power structure, where power is concentrated in the hands of a selected few, the corrosive nature of power often drives these high-powered individuals to display more self-centered behaviors and employ various strategies to consolidate their power [41], which, inevitably come at the expense of certain team members. In response to the perceived loss of their own interests, team members may form alliances against individuals in positions of power. Extensive research indicates that centralization fosters power struggles, which hinder conflict resolution within teams [42] and contribute to the emergence of subgroups within the team. Moreover, an excessive concentration of power within a team tends to have adverse effects on social interactions among team members [39], thus further exacerbating the potential for team fragmentation. In the context of external CEO succession, the inherent disadvantage faced by an external CEO leads to a smaller power gap between the CEO and other TMT members at the initial stages of succession. Simultaneously, in their efforts to garner trust and support from other TMT members and effectively implement strategic changes, external CEOs consciously cultivate an organizational environment that fosters equality and inclusivity, which facilitate information exchange and interaction among subgroups, ultimately reducing the magnitude of the TMT faultline. Building on the proceeding analysis, we, therefore, posit.

H3a. In the CEO turnover scenario, external CEO successors weaken the positive impact of CEO power on the TMT faultline.

Another reason for our emphasis on CEO power stems from the understanding that it is not solely the demographic attributes of TMT members that significantly impact outcomes, but rather changes in the power structure that emerges from their interactions and their subsequent effects [43]. In the external CEO succession scenario, board expectations to improve performance, early dismissal threats faced by new CEOs, long-standing corporate inertia, and considerations for their own reputation and career development all make external successors mandated and intrinsically motivated to undertake strategic change. Accordingly, outside CEO successors may align their TMT personnel to their strategic goals and be more inclined to establish diverse TMTs for better integration of resources and promotion of team performance [38]. The outsider disadvantage makes outside CEO successors inadequate in firm-specific knowledge and difficult to establish their own authority in a short period of time after succession, contributing to a smaller power gap between CEOs and other TMT members and a culture of freedom and equality within TMTs. Based on their diverse professional knowledge, skills, and information, TMT members can fully discuss and generate a clash of ideas, thus providing more possibilities for knowledge integration within TMTs, giving full play to TMT efficacy and ensuring TMT stability. CEO successors' power increases with their longer tenure and establishment of their authority. The increased power of outside CEO successors helps them overcome the shortcomings of confrontation and fragmentation among the different alliance subgroups within TMTs and regulate the relationships among the subgroups so that the advantages of diverse knowledge, skills, and information can be better taken of to facilitate the initiation and implementation of strategic change. We propose.

H3b. In the CEO turnover scenario, CEO power strengthens the relationship between CEO successor origins and strategic change. Specifically, CEO power promotes the positive effect of external CEO successors on strategic change.

3. Research design

3.1. Sample source and selection

In this paper, A-share listed companies in Shanghai and Shenzhen were selected as the research sample. To reflect the impact of different origins of CEO successors on the strategic changes of companies, we screened the sample as follows: (1) excluding samples where new CEOs left within 2 years after taking office; (2) excluding samples where multiple CEO turnovers occurred within one year; (3) excluding samples of financial and insurance companies, public utilities, and ST and *ST categories; and (4) excluding samples with

missing relevant data. Finally, 4128 (firm/year) valid observation samples were obtained. In this paper, the sample period of CEO turnover is from 2009 to 2018. Since there may exist a lagged effect on the impact of CEO turnover on strategic change, this paper lags the data on strategic change and control variables by two years, and the sample period is from 2011 to 2020. Furthermore, the sample period for the TMT faultline (ASW) spans from 2009 to 2018 and is not lagged, as CEO succession typically exerts an immediate impact on the TMT faultline. The CEO turnover and relevant financial data used in this paper were obtained from CSMAR (China Stock Market & Accounting Research Database). To control for the effect of outliers, all continuous variables are winsorized at the 1% and 99% levels. The standard errors are cluster-adjusted by firm-level to address potential panel data autocorrelation issues.

3.2. The design of variables and measures

3.2.1. Explained variables

Strategic change (SC). This paper, based on the availability of data and drawing on Finkelstein & Hambrick [44], and Datta, Rajagopalan, & Zhang [45], measures SC with the annual volatility of strategic resource allocation in the firm. If the allocation of strategic resources fluctuates more on the year-to-year interval, the strategic change is considered to be stronger, and vice versa. Specifically, firstly, we obtain 6-dimensional indicators of corporate strategic resources, including 3 basic resource allocation indicators and 3 expense structure indicators, namely: (1) advertising expenditure to sales revenue ratio; (2) R&D expenditure to sales revenue ratio; (3) the net value of fixed assets to the total value of fixed assets ratio; (4) non-productive expenditure to sales revenue ratio; (5) inventory to sales revenue ratio; (6) financial leverage coefficient. Secondly, the variance ($\sum [t_i - T]^2 / [n - 1]$) of each of the above indicators over 5 years (T-1, T+3) was measured using the 6 years from 2012 to 2017 as the base period T. Then the obtained annual variances were standardized based on the industry, and finally the values of the 6 indicators after the above standardization were summed up to obtain the annual strategic change index SC for each company. The larger the value, the greater the fluctuation of the firm's strategic resource allocation over the annual interval, and the greater the magnitude of the firm's strategic change.

3.2.2. Explanatory variables

Origins of CEO successors (Origin). Drawing on the studies of Zhang & Rajagopalan [27], the origins of CEO successors are classified as insiders and outsiders. Outsider CEO succession occurs when the successor is recruited from outside the listed company and has no prior experience or has been with the listed company for less than 2 years. Insider succession, on the other hand, involves a successor who comes from within the listed company and has worked there within the past 2 years. In this research, the origins of CEO successors are represented as dummy variables, with a value of 1 assigned to outsider succession and 0 to insider succession. Fig. 1 presents the global CEO turnover and the ratios of insider and outsider successions from 2009 to 2018. It is observed that the overall CEO turnover ratio is increasing, with insider successors being the predominant source of CEO succession.
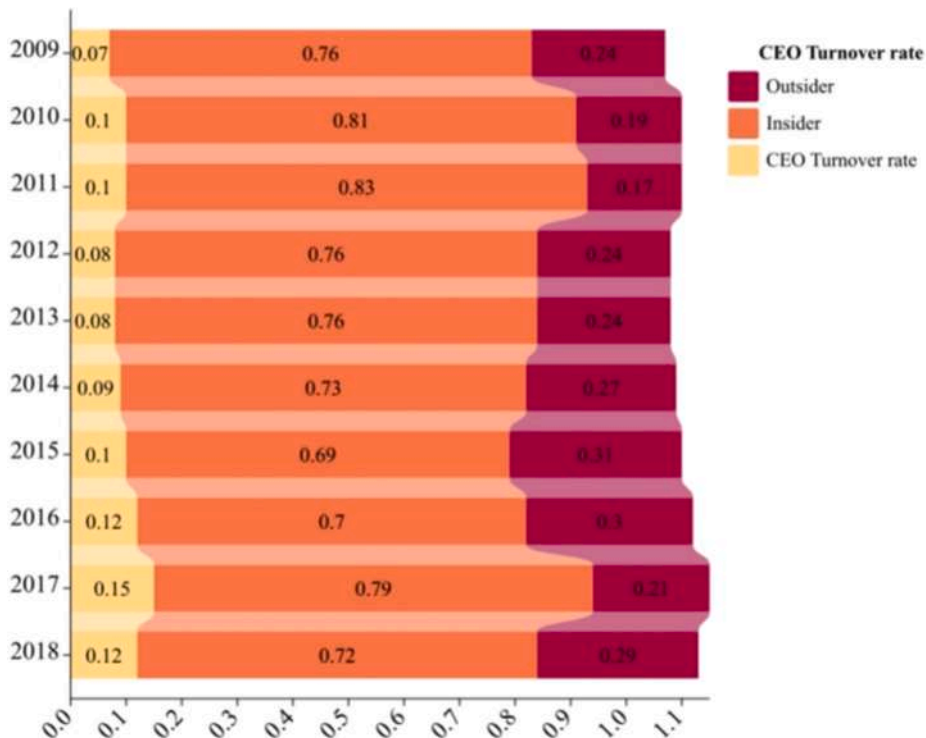

Fig. 1. CEO turnover rate from 2009 to 2018.

3.2.3. Mediating variables

TMT faultline (ASW). Lau and Murnighan [19] define a team faultline as a hypothetical dividing line that splits a group into subgroups based on one or more attributes. While this definition sheds light on the fundamental impact of team composition, it remains primarily conceptual and lacks quantitative operationalization. To address this limitation, subsequent research by Thatcher et al. [46] and Bezrukova, Jehn, and Zanutto [47] quantified the concept of team faultline and further classified team faultlines into social categorization faultlines (such as age and gender) and information-based faultlines (including tenure, education, and functional background). This classification has since become the prevailing framework for studying the economic implications of the TMT faultline [35,48].

The measurement of TMT faultline primarily draws on the research by Xu and Lei [49], which incorporates five key attributes of TMT members: gender, age, education level, functional background, and tenure. Gender is dichotomized into male and female, with a corresponding value of 1 or 0 assigned to each category. Age is standardized by dividing the actual age of a member by 10, enabling a consistent scaling with the other categorical variables. Education level is categorized into five types: secondary school and below, college, bachelor's degree, master's degree, and doctorate, which are assigned values from 1 to 5, respectively, with higher values representing a higher level of education. The functional background is divided into three categories: conversion functions (e.g., production, operations), output functions (e.g., sales, marketing), and support functions (e.g., administration, human resources), with a value of 1 or 0 assigned to each respective category. Tenure is measured in years and represents the duration a member has served in a management position. Drawing on Meyer and Glenz [50], the formula for measuring the TMT faultline is presented in equation (1) as follows.

$$S(i) = \frac{b_i - a_i}{\max(a_i, b_i)} \tag{1}$$

Where a_i is the intra-cluster dissimilarity, which refers to the average distance from individual i to other individuals in the same group, and b_i is the inter-cluster dissimilarity, which refers to the average distance from individual i to individuals in other groups. A positive value of S_i indicates a good clustering effect while a negative value of S_i indicates a worse clustering effect. This method uses clustering to classify groups, and the classification results are examined from the perspective of intra-group similarity and inter-group difference, and the algorithm takes values between −1 and 1. ASW clustering starts with pre-clustering the team members. The basic idea of pre-clustering is to first group each of the n members of the team into a class of n clusters, calculate the distance between the two clusters, form a distance matrix, and use different strategies to merge them until all objects belong to the same cluster. ASW was selected as a measure of TMT faultline because only ASW can satisfy the five conditions that should be present in the faultline measurement proposed by Meyer, Glenz, & Antino [51], and all other methods have different degrees of deficiencies. This paper employs ASW to capture the holistic effects of TMT members' attributes interacting with each other in general, which is different from many previous studies that divide TMT faultlines into different types and examine their effects separately [33,34]. We believe that the measurement strengths of ASW and a comprehensive grasp of the multi-attribute interactions of TMT members more accurately reflect the relationship between CEO successor origins, TMT faultline, and strategic change.

3.2.4. Moderating variables

CEO power. The measurement of CEO power in most existing studies is rooted in the refinement and optimization of Finkelstein's [21] dimensions and measurement of power in TMTs. Notably, Quan, Wu, and Wen [52] have developed a highly regarded and valid approach for measuring CEO power within the Chinese context, which has gained widespread acceptance. Consistent with Quan et al. [52], CEO power is measured through four categories with a total of eight dummy variables. Specifically, it includes (1) organizational power, measured by two dummy variables: whether the CEO is also the chairman of the board and whether the CEO is an inside director of the company; (2) expert power, measured by two dummy variables: whether the CEO has a senior title and whether the CEO has a long enough tenure; (3) ownership power, measured by two dummy variables: whether the CEO has equity and the level of ownership by institutional investors; and (4) reputational power, measured by two dummy variables: whether the CEO has a high educational background and whether the CEO works part-time outside the company. To capture the multifaceted nature of CEO power, this study integrates four indicators and eight dimensions that encompass various aspects of CEO power. By utilizing the principal component analysis method, a comprehensive CEO power indicator is constructed, consolidating the aforementioned indicators and dimensions. The resulting indicator ranges between 0 and 1, providing a holistic representation of CEO power. Refer to Table 1 for a

Table 1
Dimensional indicators of CEO power (Power).

Categories	Symbols measurements
Organizational power	Dual Also serves as chairman, yes takes 1, no 0
	Insider-director Also serves as insider-director, yes takes 1, no 0
Expert power	Rank Having a senior title, yes takes 1, no 0
	Tenure exceeding industry median, yes takes 1, no 0
Ownership power	CEO_share Holding the company's equity, yes takes 1, no 0
	Istitute_share Institutional investors' shareholdings below the industry median, yes takes 1, no 0
Reputational power	Education Having a high educational background, master or above takes 1, no 0
	Part-time job Having a part-time job outside the firm, yes takes 1, no 0

detailed overview of the specific indicators, dimensions, and measures employed in this analysis.

3.2.5. Control variables

This study initially incorporates controls for firm-level variables that may influence strategic change subsequent to CEO succession. These variables include firm size, age, performance, and capital structure. Firm size pertains to the strategic flexibility and resource advantages available to organizations, with smaller firms generally exhibiting greater motivation for strategic change. As a firm's establishment duration increases, it is more prone to develop strategic inertia. The firm performance serves as a crucial criterion for evaluating CEO competence, while firm capital structure directly impacts resource allocation within the corporation, both of which significantly influence corporate strategic decision-making. We further control for the nature of firms' property rights, taking into account the distinction between state-owned enterprises (SOEs) and non-SOEs. These two types of firms possess divergent interests and objectives, and new CEOs encounter varying levels of oversight upon succession, thereby resulting in disparities in their strategic decision-making. Additionally, we control for variables such as the largest shareholder's institutional investment ratio and shareholding ratio. Previous studies investigating second-tier agency problems have illustrated the prevalence of large shareholders with substantial equity stakes and the impact of equity checks and balances among these shareholders on firm value, strategic decisions, and the propensity for corporate risk-taking. Furthermore, we include two variables, namely board size and board independence, as control variables from the perspective of the firm's board of directors. Board size serves as an indicator of potential conflicts within the board, while board independence acts as a safeguard against opportunistic actions by major shareholders and insiders, both of which are critical influencing factors in strategic decision-making and implementation.

To account for the potential lagged effect of CEO change on strategic change, this study incorporates a two-year lag for the data on strategic change and the control variables. The definitions and measurement indicators of the variables utilized in this research are detailed in Table 2.

3.3. Model construction

This paper employs panel regressions to investigate the impact of different CEO successor origins on strategic change and its underlying mechanisms in the CEO turnover scenario. The following econometric models are established: Model (1) examines the overall relationship between different origins of CEO successors and strategic change, where α_1 represents the coefficient for the explanatory variable Origin, α_2 for the coefficient for a series of control variables, α_0 for the intercept term, and ε_{it} for the random disturbance term. A positive value of α_1 indicates that external CEO successors promote strategic change. Model (2) and Model (3) further assess whether the TMT faultline serves as a mediating pathway through which different origins of CEO successors influence strategic change. In these two models, the coefficients β_1 and γ_1 represent the coefficients for the explanatory variable Origin, with a positive coefficient value of β_1 indicating a positive relationship between external CEO successors and the TMT faultline. Additionally, the coefficient γ_2 represents the coefficient of the mediating variable "ASW". Model (4) investigates the relationship between CEO power and the TMT faultline in the context of external CEO succession. α_4 represents the coefficient of the interaction term Power $\times$ Origin. A positive value of α_4 suggests that in the context of external CEO succession, CEO power amplifies the magnitude of the TMT faultline. Finally, Model (5) tests the potential moderating role of CEO power in the relationship between CEO successor origins and strategic change. β_4 represents the regression coefficient of the interaction term Power $\times$ Origin, with a positive value of β_4 signifying

Table 2

Definitions and measurements of variables.

Types	Names	symbols	measurements
Explained variable	Strategic change	SC	Sum of annual variances over 5 years for six strategic indicators after standardization
explanatory variable	Origins of CEO successors	Origin	Insider CEO successor is assigned with the value of 1 and outside CEO successor 0
Mediating variable	TMT faultline	ASW	using clustering for group classification, examining the classification result from the perspective of intra-group similarity and inter-group difference
Moderating variable	CEO power	Power	Synthesizing the four power categories into a CEO power indicator with principal component analysis
Control variable	Firm size	Size	Natural logarithm of the company's total assets for the year
	Firm age	Age	Natural logarithm of the number of years the company has been in existence
	Firm performance	Roa	Industry-adjusted return on assets . Return on assets is the ratio of net income to total assets at the end of the year
	Firm leverage	Lev	The ratio of total liabilities to total assets
	Institutional shareholding	Instihold	The ratio of the number of shares held by institutional holders to the total number of shares in the company
	Nature of property right	Soe	SOE is assigned the value of 1, non-SOE 0
	The shareholding ratio of top 1 shareholder	Top 1	Percentage of shareholding of the largest shareholder
	Board size	Boardsize	Number of Board Members
	Board independence	Independ	The ratio of total number of independent directors to board size
	year/industry	Year/ Industry	Controlling for year/industry dummy variables

that CEO power strengthens this relationship. In addition, this paper draws upon the studies conducted by various scholars [53–55] and incorporates controls for industry and year dummy variables.

$$\text{Model 1}: SC_{it} = \alpha_0 + \alpha_1 Origin_{it} + \alpha_2 \sum Controls_{it} + \sum Year + \sum Industry + \varepsilon_{it}$$

$$\text{Model 2}: ASW_{it} = \beta_0 + \beta_1 Origin_{it} + \beta_2 \sum Controls_{it} + \sum Year + \sum Industry + \varepsilon_{it}$$

$$\text{Model 3}: SC_{it} = \gamma_0 + \gamma_1 Origin_{it} + \gamma_2 ASW_{it} + \gamma_3 \sum Controls_{it} + \sum Year + \sum Industry + \varepsilon_{it}$$

$$\text{Model 4}: ASW_{it} = \alpha_3 + \alpha_4 Power_{it} \times Origin_{it} + \alpha_5 Origin_{it} + \alpha_6 Power_{it} + \alpha_7 \sum Controls_{it} + \sum Year + \sum Industry + \varepsilon_{it}$$

$$\text{Model 5}: SC_{it} = \beta_3 + \beta_4 Power_{it} \times Origin_{it} + \beta_5 Origin_{it} + \beta_6 Power_{it} + \beta_7 \sum Controls_{it} + \sum Year + \sum Industry + \varepsilon_{it}$$

4. Empirical results

4.1. Descriptive statistics and correlation analysis

This study utilized Stata 16 software to conduct descriptive statistics on the variables under investigation, and the findings are presented in Table 3. The average value of strategic change (SC) is 0.650, with a range of 0.085–4.921, indicating substantial variation in the current strategic change among Chinese listed companies. The average value of CEO successor origins (Origin) is 0.246, suggesting that the majority of CEO successors in China are internal candidates. The remaining control variables exhibit noteworthy variations across the listed companies, indicating a satisfactory distribution within the sample.

This paper presents the correlation coefficient matrix through a visual representation, as depicted in Fig. 2, which illustrates a heat map of correlation clusters. In the heat map, closer proximity to the color red indicates a higher correlation. The observations reveal a positive impact of CEO successor origins on strategic change, suggesting that external CEO successors contribute to corporate strategic change. Furthermore, the control variables, including firm leverage (Lev), the ratio of institutional investment (Instihold), nature of property rights (Soe), and board independence (Independ), exhibit positive associations with strategic change.

4.2. Annual distribution of CEO successor origins

Table 4 presents the annual distribution of CEO origin. From the table, it can be observed that CEO origin is a time-varying variable. From 2009 to 2018, the number of companies with internal CEO succession is consistently higher than the number of companies with external CEO succession, which aligns with PwC's statistics.

4.3. Regression analysis

4.3.1. Analysis of the direct effect of CEO successor origin on strategic change

The prevailing literature examining the relationship between CEO turnover and corporate governance commonly assumes a negligible unobservable individual effect in firms. This assumption is commonly tested using mixed sample regression methods instead of utilizing alternative methodologies for robustness tests. However, it is too strong an assumption since there is significant heterogeneity across industries and across firms in the same industry. To control for individual effects of firms, both random effects model and fixed effects model estimation methods are employed in this paper. In addition, the appropriateness of various regression methods for model estimation is judged by statistical tests.

Table 5 presents the regression results for the mixed regression, random effects, and fixed effects models. In columns (1)–(3), the regression coefficients for the variable "Origin" are 0.052, 0.044, and 0.049, respectively. These coefficients are all statistically significant at the 1% level, indicating that external CEO succession has a significant positive effect on corporate strategic change. Thus, Hypothesis 1 holds. To identify the appropriateness of the three models, this study conducted two tests. First, the LM test between the mixed sample and random effects models revealed a chi-square value of 862.73. The null hypothesis was rejected at the 1% significance level, indicating that the individual effects are significantly non-zero and that the random effects model outperforms the mixed sample model. Second, the Hausman test was performed between the random effects and fixed effects models. The test yielded a chi-square value of 26.10, and the null hypothesis was rejected at the 1% significance level, indicating a significant correlation between the individual effects and the independent variables. Therefore, the fixed effects model is preferred over the random effects model. Consequently, the coefficient of 0.049 provides the most appropriate description of the relationship between the different origins of CEO successors and corporate strategic change. These results are also economically significant. Using column (3) as an example, the coefficient of the variable Origin is 0.049. This indicates that, while controlling for other variables, there is a statistically significant increase of 4.9% in the average degree of strategic change when a company undergoes external CEO succession. The adjusted R^2 of the fixed effects model is 0.119 (column 3). This value suggests that CEO succession has limited explanatory power in predicting strategic change in firms. However, this limited explanatory power may be due to the influence of certain omitted variables, despite our efforts to include other important variables that affect corporate strategic change in the model as control variables. In addition to the adjusted R^2 value, we meticulously consider the importance and economic significance of variables. Furthermore, our findings are consistent

Table 3
Descriptive statistics.

Variable	N	Mean	Sd	Min	P25	Median	P75	Max
SC	4128	0.650	0.387	0.085	0.417	0.550	0.758	4.921
Origin	4128	0.246	0.431	0	0	0	0	1
ASW	4128	0.548	0.199	0.042	0.426	0.545	0.688	1
Power	4128	−0.032	0.884	−2.161	−0.599	0	0.425	2.017
Size	4128	22.170	1.370	17.277	21.205	21.996	22.943	28.504
Roa	4128	0.007	0.014	−0.120	0.001	0.006	0.014	0.132
lev	4128	0.433	0.235	0.009	0.242	0.422	0.596	1.997
Instihold	4128	3.464	1.145	−6.908	3.268	3.834	4.154	4.594
Soe	4128	0.412	0.492	0	0	0	1	1
Top1	4128	0.347	0.151	0.036	0.230	0.321	0.448	0.894
Top25	4128	0.717	0.618	0.000	0.238	0.545	1.032	3.988
Boardsize	4128	2.130	0.202	1.386	1.946	2.197	2.197	2.890
Independ	4128	0.375	0.055	0.250	0.333	0.364	0.429	0.750

Note : This table reports the descriptive statistics of the variables used in the analyses. N is the number of variable.Mean is the mean value of the variable, Sd is the standard deviation of the variable, Min is the minimum value of the variables, P25 is the 25th digit value of the variable, Median is the median digit value of the variable, P75 is the 75th digit value of the variable, and Max is the maximum value of the variable.All continuous variables are winsorized at the 1% and 99% levels. All variables are defined in Table 2.
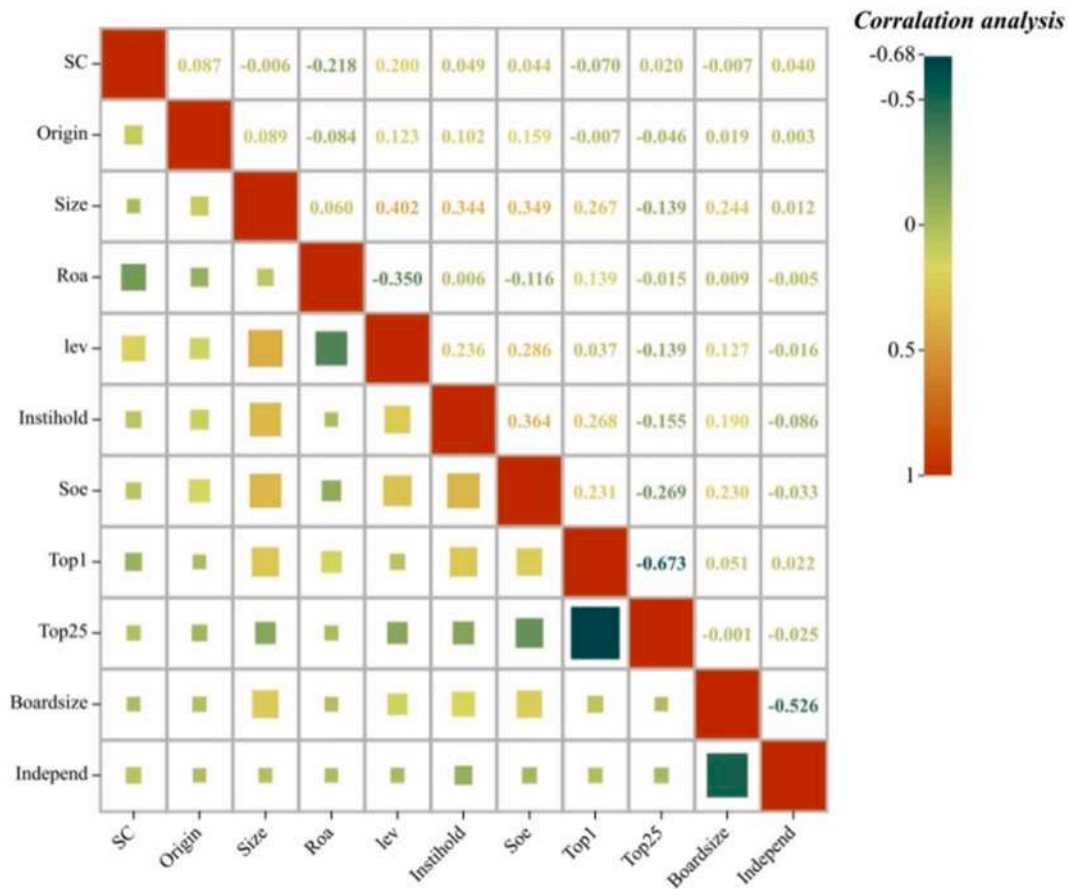
Fig. 2. The correlation coefficient matrix heat map.

with other studies in the literature [26,56–58], which also report a similar range of adjusted R^2 values.

4.3.2. Analysis of the mediating effect between CEO successor origins and strategic change: a TMT faultline perspective

Table 6 illustrates the regression results of Model (2) and Model (3) used to test the mediating effect of the TMT faultline. The results in the table show that the regression coefficient of outside CEO successors on strategic change in Model (2) is −0.035 (β_1) and significant at the 1% level, indicating that outside CEO successors inhibit the TMT faultline. Model (3) tests the aggregate effect

Table 4

Annual distribution of CEO origin.

Year	Insider succession	Outsider succession	Total
2009	220	69	289
2010	326	77	403
2011	330	66	396
2012	258	81	339
2013	250	80	330
2014	277	101	378
2015	279	128	407
2016	335	141	476
2017	492	133	625
2018	347	138	485
Total	3114	1014	4128

Note : This table reports the annual distribution of CEO origin.

Table 5

Baseline regression results.

Variables	(1)	(2)	(3)
	Mixed sample model:SC	Random effects model:SC	Fixed effects model:SC
Origin	0.052***	0.044***	0.049***
	(3.75)	(3.48)	(3.00)
Size	−0.021***	−0.019***	−0.028***
	(-3.95)	(-3.38)	(-3.27)
Roa	−3.905***	−3.310***	−3.881***
	(-8.77)	(-7.62)	(-6.07)
lev	0.273***	0.254***	0.315***
	(9.00)	(8.37)	(5.94)
Instihold	0.016***	0.009	0.011*
	(2.84)	(1.56)	(1.89)
Soe	−0.008	0.016	−0.014
	(-0.59)	(1.10)	(-0.76)
Top1	−0.103*	−0.129**	−0.146**
	(-1.85)	(-2.23)	(-2.31)
Top25	0.008	0.003	0.004
	(0.59)	(0.20)	(0.26)
Boardsize	0.027	0.005	0.020
	(0.76)	(0.14)	(0.46)
Independ	0.389***	0.289**	0.412***
	(3.08)	(2.28)	(2.86)
Constant	0.782***	0.843***	0.961***
	(5.81)	(5.94)	(5.00)
Industry	Yes	Yes	Yes
Year	Yes	Yes	Yes
N	4128	4128	4128
Adj_R^2	0.075	0.044	0.119
LM		862.730	
Hausman			26.100

Notes: T-values are in parentheses. ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included. Standard errors were cluster-adjusted by firm-level.

between different origins of CEO successors, the TMT faultline, and strategic change. The regression results show that the regression coefficient γ_2 of the TMT faultline on strategic change is −0.058 and is significant at the 10% level, and the regression coefficient γ_1 of the CEO successors on strategic change is 0.047 and significant at the 1% level. According to the mediation effect test process, when α_1 is significant, β_1, γ_2, and γ_1 are significant and $\beta_1*\gamma_2$ and γ_1 have the same sign, there exists a mediating effect of TMT faultline between different origins of CEO successors and strategic change. The TMT faultline is an effective intermediary for CEO successor origins to influence corporate strategic change. Through additional calculations, it is determined that the direct effect of outside CEO successors on strategic change is 0.047, accounting for 95.92% (0.047/0.049) of the total effect on strategic change. Furthermore, the TMT faultline has an indirect effect of 4.08% (0.002/0.049) on the total effect, indicating that it serves as a partial mediating pathway through which outside CEO successors influence corporate strategic change. Bootstrap was then used to test the robustness of the above findings. The results in Table 6 demonstrate that none of the Bootstrap (95%) confidence intervals contained 0, indicating that the test results support the previous conclusion, thus confirming that Hypothesis 2 holds.

4.3.3. The role of CEO power played in the scenario of CEO turnover

The empirical results of Model (5) are demonstrated in Column (1), Table 7. The coefficient of CEO power is 0.023, significant at the

Table 6
Regression results of mediating effect of the TMT faultline.

Variables	Model (2):ASW		Model (3):SC	
	Coefficient	T-value	Coefficient	T-value
Origin	−0.035***	−4.94	0.047***	2.89
ASW			−0.058*	−1.79
Constant	0.392***	4.52	0.984***	5.12
Industry	Yes		Yes	
Year	Yes		Yes	
N	4128		4128	
Adj_R^2	0.051		0.119	
Direct effect	0.047			
Indirect effect	0.002			
Total effect	0.049			
Bootstrap test	0.002(Lower limit)、 0.008(Upper limit)			

Notes: ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included.Standard errors were cluster-adjusted by firm-level.

1% level, indicating that CEO power exacerbates the TMT faultline. The coefficient of Origin × Power is −0.032, also significant at the 1% level, which is opposite to the result direction of Model (1), suggesting that outside CEO successors negatively moderate the positive relationship between CEO power and the TMT faultline. On average, in the context of CEO external succession within a company, a one-unit increase in CEO power is associated with an average decrease of 3.62% in the TMT faultline. Hypothesis 3a holds.

Table 7 Column (2) offers an empirical result of Model (5) on the moderating effect of CEO power on the link between CEO successor origins and strategic change. The coefficient of Origin × Power, the interaction term of CEO successor origins and CEO power, is 0.044 and significant at the level of 5%, which is consistent with the result direction of Model (1), indicating that CEO power strengthens the link between CEO successors and strategic change and Hypothesis 4 holds.

5. Robustness checks

5.1. Heterogeneity analysis

5.1.1. Analysis from the perspective of different property rights

The institutional arrangement of property rights in China, particularly between state-owned enterprises (SOEs) and non-state-owned enterprises (non-SOEs), has a significant influence on corporate strategic decisions. To explore the varying impact of different origins of CEO successors on strategic change within different property rights contexts, this study divides the sample into state-owned and non-state-owned firms for sub-sample regression analysis.

Table 8 illustrates that in Group A, the coefficient of outside CEO successors on strategic change in SOEs is 0.001, but not significant, indicating that CEO successor origins are not significantly linked with strategic change in SOEs.[2] In Group B, the coefficient of CEO successor origins on strategic change in non-state firms is 0.118 and significant at the 1% level, the results of Models (2) and (3) reveal that the TMT faultline still plays a mediating role, and the coefficient of Origin × Power, the intersection of CEO origins and CEO power in Model (5), is 0.064 and significant at the 10% level, manifesting a positive moderating role of CEO power. All these results further confirm that the TMT faultline is an effective path for CEO successors of different origins to generate strategic change, and imply that corporate governance in non-SOEs is better than in SOEs (see Table 8).

5.1.2. Analysis from a life cycle perspective

Existing studies often overlook the heterogeneity among firms at different stages of their life cycle, despite the potential differences in scale, profitability, strategies, and innovation inclination. It is reasonable to assume that the impact of different CEO successors on strategic change may vary across firms at different developmental stages. This paper adopts the cash flow pattern to measure the life cycle of firms, aiming to capture the operational, investment, and financing characteristics at different stages more accurately and objectively [59]. To investigate this variability, the sample is divided into growth, maturity, and recession firms for sub-sample regression analyses.

Table 9 reveals that the coefficient of external CEO successors on strategic change of firms in their growth stage is 0.060 and significant at the 1% level, while that of firms in their maturity stage is 0.059 and significant at the 5% level. The coefficient for firms in their recession stage is −0.001, but not significant. The above results suggest that outside CEOs facilitate strategic change in growth and maturity firms but this positive effect is not significant in recession firms(see Table 9).

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[2] Due to the insignificant effect of CEO successor origins on strategic change in SOEs, this paper omits the discussion of the roles that TMT faultline and CEO power play in SOEs.

Table 7
Regression results of the moderating effect of CEO power.

Variables	Model (5):ASW	Model (5):SC
Origin × Power	−0.032***	0.044**
	(-3.38)	(2.14)
Origin	−0.036***	0.058***
	(-4.70)	(3.26)
Power	0.023***	−0.007
	(5.72)	(-0.87)
Size	0.004	−0.029***
	(1.20)	(-3.38)
Roa	0.278	−3.870***
	(1.06)	(-6.13)
lev	0.001	0.311***
	(0.06)	(5.86)
Instihold	−0.005	0.009
	(-1.64)	(1.46)
Soe	0.017**	−0.017
	(2.02)	(-0.91)
Top1	0.128***	−0.133**
	(3.89)	(-2.12)
Top25	0.021***	0.008
	(2.77)	(0.48)
Boardsize	0.033	0.019
	(1.59)	(0.43)
Independ	0.054	0.418***
	(0.78)	(2.88)
Constant	0.318***	0.998***
	(3.63)	(5.12)
Industry	Yes	Yes
Year	Yes	Yes
N	4128	4128
Adj_R^2	0.062	0.120

Notes: T-values are in parentheses. ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included. Standard errors were cluster-adjusted by firm-level.

This paper further examines the roles played by the TMT faultline and CEO power in the growth and maturity firms.[3] For the mediating effect of the TMT faultline in growth firms, the results of model (2) and model (3) show the regression coefficient of external CEO successors on the TMT faultline is −0.044 and significant at the 1% level, and that of TMT faultline on strategic change is −0.058, but not significant. Following the test procedure of mediating effect by means of Bootstrap method, this paper discovers that the confidence interval does not contain 0, which arrives at the conclusion that the mediating effect of TMT faultline is significant for growth firms. For maturity firms, the regression coefficient of outside successors on TMT faultline is 0.001 and that of TMT faultline on strategy change is −0.001, and neither is significant, so the test is conducted again using the Bootstrap method and the confidence interval is found to contain 0. Therefore, the mediating effect of the TMT faultline is not significant for maturity firms.

In terms of the moderating effect of CEO power, the results of Model (5) present that the coefficient of Origin × Power, the interaction term of CEO external successors and CEO power in growth firms, is 0.069, which is in the same direction as the coefficient of CEO external successors in Model (1) (Origin = 0.060), and is significant at the 5% level, suggesting that CEO power in growth firms plays a positive moderating role. In contrast, the interaction term (Origin × Power = 0.015) of CEO external successors and CEO power is not significant in the maturity firms, so the moderating effect of CEO power is not significant in maturity firms.

5.2. Replacing the explained variable

Corporate diversification can, to some extent, reflect the magnitude of strategic change. In this paper, we refer to Zeng and Yang [60] to measure strategic change using the number of operating units and the income entropy index for robustness testing. The classification standard of "Industry Classification Guidelines for Listed Companies" promulgated by CSRC in April 2001 is adopted as the main basis for the industries operated by listed companies, and combined with the industries of holding companies disclosed in the financial reports of listed companies, the revenue of each business of the company is categorized and combined according to industry sectors (single letter) or sub-categories (single letter+1, e.g. manufacturing), and the number of operating business units is initially counted, and then the proportion of the main business revenue of each business unit is calculated. The final number of operating business units (Dyh_n) refers to the number of industries in which the sales revenue of a certain type of industry (sector or

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[3] Due to the insignificant effect of CEO successor origins on strategic change in recession firms, this paper omits the discussion of the roles that TMT faultline and CEO power play in recession firms.

Table 8

Perspective of different property rights: SOEs vs. non-SOEs.

Group A : SOEs	Model (1):SC	Model (2):ASW	Model (3):SC	Model (4):SC
Origin	0.001	−0.027***	0.008	0.004
	(0.06)	(-2.71)	(0.09)	(0.21)
ASW			0.023	
			(0.43)	
Power				0.027**
				(2.08)
Origin × Power				−0.012
				(-0.55)
Constant	0.964***	0.480***	0.953***	0.873***
	(3.95)	(3.66)	(3.91)	(3.50)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	1702	1702	1702	1702
Adj_R^2	0.180	0.031	0.180	0.182
Group B : non-SOEs	Model (1):SC	Model (2):ASW	Model (3):SC	Model (4):SC
Origin	0.118***	−0.043***	0.114***	0.128***
	(4.28)	(-4.02)	(4.18)	(3.95)
ASW			−0.094**	
			(-2.36)	
Power				−0.030***
				(-2.95)
Origin × Power				0.064*
				(1.73)
Constant	1.366***	0.288**	1.393***	1.471***
	(4.19)	(2.21)	(4.28)	(4.49)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	2426	2426	2426	2426
Adj_R^2	0.121	0.076	0.123	0.127

Notes: T-values are in parentheses. ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included.Standard errors were cluster-adjusted by firm-level.

sub-category) accounts for more than 10% of the total revenue of the main business. The income entropy index (Dyh_entro) is calculated by equation (2), and p_i is the share of the ith industry in the total income. The larger the index, the greater the strategic change of the firm.

$$Dyh\_entro = \sum p_i \ln(1 / p_i) p_i \qquad (2)$$

The results are shown in Table 10, where outside CEOs promote corporate strategic change regardless of whether the number of operating units or the income entropy index is used, and the TMT faultline and CEO power play a mediating and positive moderating role respectively, consistent with the results above.

5.3. Replacing the mediating variable

Drawing on the study by Xu & Lei [49], this paper classifies the TMT faultline into social-related faultline and task-related faultline. Social-related faultline (SRAsw) is measured by the gender, age, and education level of TMT members. Task-related faultline (TRAsw) is measured by their functional background and tenure. The results are presented in Table 11 that both social and task-oriented faultlines mediate the process between different CEO successors and strategic change. The above findings were further tested for robustness by Bootstrap. The results are shown in Table 10 that none of the Bootstrap (95%) confidence intervals contained 0, thereby confirming our main regression results. This finding diverges from previous research that suggests that restructured top management teams (TMTs) are more likely to exacerbate the social-related faultline, thereby negatively affecting team-level and organization-level variables [34,47,48]. In fact, academic research on team faultlines has developed two research traditions over the past two decades: the social categorization perspective and the information processing perspective. It is widely accepted that a team faultline based on a social categorization perspective (i.e., social-related faultline) has a negative impact on team-level and organization-level variables [34,47,48]. In contrast, the faultline based on an information processing perspective (i.e., task-related faultline) has a positive impact on team-level and organization-level variables [34]. The social-related faultline affects team behavior and performance through social integration, while the task-related faultline affects team behavior and performance through cognitive integration [61]. As mentioned earlier, the degree of faultline depends on the intra-group similarity and inter-group differences of the team subgroups. In the context of CEO external succession, launching strategic change to enhance corporate performance is a common goal for the CEO and other TMT members, and the team's task orientation is clear. The subgroups will strengthen communication and integrate their social relationships to promote the achievement of this common goal of strategic change, thus reducing the probability of social faultline. Moreover, TMTs are different from other teams in that their members are mostly highly diversified professionals. With strategic change

Table 9

A life cycle perspective：growth-maturity-recession stages.

Group A：Growth	Model (1):SC	Model (2):ASW	Model (3):SC	Model (4):SC
Origin	0.060***	−0.044***	0.058**	0.091***
	(2.58)	(-4.06)	(2.50)	(3.02)
ASW			−0.058	
			(-1.30)	
Power				0.006
				(0.64)
Origin × Power				0.069**
				(2.29)
Constant	0.388*	0.561***	0.421*	0.454*
	(1.69)	(5.01)	(1.82)	(1.91)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	2229	2229	2229	2229
Adj_R^2	0.110	0.083	0.111	0.113
Group B：Maturity	Model (1):SC	Model (2):ASW	Model (3):SC	Model (4):SC
Origin	0.059**	0.001	0.059**	0.062**
	(2.31)	(0.04)	(2.30)	(2.38)
ASW			−0.001	
			(-0.01)	
Power				−0.003
				(-0.18)
Origin × Power				0.015
				(0.48)
Constant	1.1839***	0.1419	1.1840***	1.0974***
	(3.75)	(0.98)	(3.75)	(3.50)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	1135	1135	1135	1135
Adj_R^2	0.184	0.010	0.183	0.184
Group C：Recession	Model (1):SC	Model (2):ASW	Model (3):SC	Model (4):SC
Origin	−0.001	−0.021	−0.002	−0.005
	(-0.03)	(-1.36)	(-0.04)	(-0.12)
ASW			−0.022	
			(-0.26)	
Power				−0.034
				(-1.42)
Origin × Power				0.027
				(0.50)
Constant	1.633***	0.235	1.638***	1.678***
	(3.47)	(1.15)	(3.50)	(3.44)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	764	764	764	764
Adj_R^2	0.138	0.043	0.136	0.137

Notes: T-values are in parentheses. ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included.Standard errors were cluster-adjusted by firm-level.

as the goal, the subgroups are more likely to form an open and inclusive atmosphere, and the high-level team members with different attributes strengthen information exchange between subgroups through cognitive integration, mitigate cognitive differences between subgroups, and improve team behavior and performance.

5.4. Propensity score matching and coarsened exact matching tests

To mitigate the impact of self-selection bias on the findings, this study employs a propensity score matching (PSM) test. Firstly, the sample of companies with outside CEO successors is treated as the treatment group, while the sample of companies with internal CEO successors serves as the control group. All control variables from Model (1) are used as matching variables. Subsequently, the Logit model is employed to apply three matching methods, namely nearest neighbor matching, radius matching, and kernel matching, to the dataset. This process yields 2,932, 3,959, and 4094 matched observations, respectively. The model (1) is then re-estimated based on the matched sample. The results, as shown in Table 12, columns (1)–(3), reveal that the coefficients of Origin remain statistically significant at the 1% level.

Coarsened exact matching (CEM) is employed in this study to enhance comparability between the treatment and control groups by achieving balance in the distribution of covariates and controlling for the influence of confounding factors present in the observed data. To achieve this, control variables such as Size, Roa, lev, Soe, Boardsize, and Independ were selected as covariates and stratified accordingly. Subsequently, the exact matching algorithm was applied to precisely match the research objects within each stratum,

Table 10
Regression results by replacing the explained variable.

Group A:Dyh_n	Model (1):SC	Model (2):ASW	Model (3):SC	Model (4):SC
Origin	0.176***	−0.035***	0.171***	0.305***
	(4.69)	(-4.94)	(4.55)	(5.85)
ASW			−0.131*	
			(-1.93)	
Power				0.074***
				(3.25)
Origin × Power				0.389***
				(5.13)
Constant	0.217	0.392***	0.269	0.191
	(0.54)	(4.52)	(0.67)	(0.48)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	4128	4128	4128	4128
Adj_R^2	0.091	0.051	0.092	0.115
Group B:Dyh_entro	Model (1):SC	Model (2):ASW	Model (3):SC	Model (4):SC
Origin	0.072***	−0.035***	0.070***	0.124***
	(3.91)	(-4.94)	(3.78)	(5.45)
ASW			−0.0610*	
			(-1.71)	
Power				0.023**
				(2.23)
Origin × Power				0.166***
				(5.37)
Constant	−0.833***	0.392***	−0.809***	−0.823***
	(-3.97)	(4.52)	(-3.86)	(-3.95)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	4128	4128	4128	4128
Adj_R^2	0.123	0.051	0.123	0.136

Notes: T-values are in parentheses. ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included.Standard errors were cluster-adjusted by firm-level.

Table 11
Regression results by replacing the mediating variable.

Group A：SRAsw	Model (2):SRAsw		Model (3):SC	
	Coefficient	T-value	Coefficient	T-value
Origin	−0.035***	−3.23	0.045***	2.76
SRAsw			−0.111***	−4.26
Constant	−0.392***	−3.20	0.918***	4.83
Industry	Yes		Yes	
Year	Yes		Yes	
N	4128		4128	
Adj_R^2	0.043		0.125	
Bootstrap test	0.004(Lower limit), 0.012(Upper limit)			
Group B：TRAsw	Model (2)：TRAsw		Model (3)：SC	
	Coefficient	T-value	Coefficient	T-value
Origin	−0.029**	−2.52	0.046***	2.83
TRAsw			−0.092***	−3.88
Constant	−0.462***	−3.71	0.919***	4.83
Industry	Yes		Yes	
Year	Yes		Yes	
N	4128		4128	
Adj_R^2	0.041		0.123	
Bootstrap test	0.002(Lower limit)、0.008(Upper limit)			

Notes: T-values are in parentheses. ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included.Standard errors were cluster-adjusted by firm-level.

utilizing the empirical distribution of the samples. The 2749 successfully matched samples were then retained for further analysis. The regression analysis of Model (1) was performed using the matched data, with the results presented in column (4) of Table 12. Both PSM and CEM tests indicate that our baseline results remain robust after addressing the self-selection bias.

Table 12
Results of propensity score matching and Coarsened Exact Matching tests.

Variables	(1)	(2)	(3)	(4)
	SC	SC	SC	SC
Origin	0.051***	0.056***	0.049***	0.039***
	(3.24)	(3.43)	(3.01)	(2.65)
Size	−0.028***	−0.026***	−0.027***	−0.011
	(-2.96)	(-3.03)	(-3.21)	(-1.54)
Roa	−3.646***	−3.760***	−3.904***	−3.171***
	(-4.99)	(-5.66)	(-6.08)	(-4.65)
lev	0.395***	0.310***	0.309***	0.237***
	(6.48)	(5.68)	(5.83)	(5.71)
Instihold	0.011	0.011*	0.011**	
	(1.24)	(1.73)	(1.98)	
Soe	−0.046**	−0.020	−0.013	−0.016
	(-2.32)	(-1.10)	(-0.75)	(-1.03)
Top1	−0.124*	−0.121*	−0.148**	
	(-1.69)	(-1.88)	(-2.33)	
Top25	0.013	0.009	0.005	
	(0.62)	(0.51)	(0.27)	
Boardsize	0.046	0.024	0.019	0.073
	(0.90)	(0.54)	(0.44)	(1.47)
Independ	0.541***	0.425***	0.426***	0.476**
	(3.30)	(2.91)	(2.94)	(2.48)
Constant	0.830***	0.902***	0.949***	0.343
	(3.86)	(4.65)	(4.93)	(1.57)
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
N	2932	3959	4094	2749
Adj_R^2	0.172	0.129	0.138	0.119

Notes: ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included. Standard errors were cluster-adjusted by firm-level.

5.5. Heckman two-stage model tests

To alleviate potential endogeneity issues arising from sample selection (i.e., this study only considers companies that have experienced CEO succession) and self-selection bias (i.e., the decision by the board to select an internal or external CEO may be strategic), Heckman two-stage procedure [62] was employed, which is widely used in recent CEO succession research [56]. This study uses the outsider succession rate (OSR) of CEO successors in the same industry as an instrumental variable. From a correlation perspective, OSR is significantly related to external CEO succession in firms, mainly because the board is influenced by social trends when selecting a CEO successor (such as choosing a celebrity CEO or hiring a well-known executive through a headhunter) [63], especially by the selection pattern of CEO successors in the same industry [64]. Meanwhile, there is no significant correlation between the outsider succession rate of CEO successors in the same industry and a single company's strategic orientation after CEO succession.

To address the issue of sample selection, in the first stage, this study used a Probit model to predict the potentially endogenous variable of CEO successor origins (Origin), including samples of both CEO successions and non-successions during the observation period (N = 21,946). The control variables in Model (1) were used as covariates along with the instrumental variable OSR in the Probit regression. The inverse Mills ratio (IMR) was then obtained and used as a control variable in the second stage of the Heckman regression. Table 13, columns (1) and (2), present the results of the Heckman two-stage regression to address the sample selection issue. Column (1) shows that the instrumental variable OSR is significantly and positively correlated with external CEO successors (Origin) at the 1% level, indicating the validity of the instrumental variable. In Column (2), after adding IMR, CEO successor origins (Origin) remain significantly and positively correlated with strategic change (SC) at the 1% level, supporting Hypothesis 1.

The appointment of a new CEO by a company may be influenced by unobservable factors, which raises concerns about endogeneity issues due to self-selection bias that may not have been considered in Model (1). To address this problem, this study employed the Heckman two-stage model to re-examine the sample (N = 4128). In the first stage of the model, the CEO successor origins (Origin) was used as the dependent variable, and the control variables in Model (1) were used as covariates, along with the instrumental variable OSR in the Probit regression. The inverse Mills ratio was obtained and used as a control variable in the second stage of the regression. Table 13, columns (3) and (4), present the results of the Heckman two-stage regression to address the issue of self-selection bias. Column (3) shows that the instrumental variable OSR is significantly and positively correlated with external CEO succession (Origin) at the 1% level, thereby reinforcing the validity of the instrumental variable. In Column (4), after incorporating IMR, the variable, CEO successor origins (Origin), remains significantly and positively related to strategic change (SC) at the 5% level, indicating that Hypothesis 1 still holds.

Table 13

Regression results of Heckman two-stage model tests.

Variables	(1) Origin	(2) SC	(3) Origin	(4) SC
OSR	10.334***		3.711***	
	(22.17)		(20.07)	
Origin		0.247***		0.098**
		(2.58)		(2.15)
Size	−0.030*	−0.420***	0.007	−0.027***
	(-1.72)	(-10.08)	(0.31)	(-3.21)
Roa	0.326	−3.398***	−6.210***	−3.833***
	(1.20)	(-6.09)	(-3.23)	(-6.01)
lev	0.254**	1.568***	0.186	0.305***
	(2.54)	(5.74)	(1.48)	(5.71)
Instihold	−0.008	−0.694***	0.084***	0.011*
	(-0.09)	(-3.83)	(3.08)	(1.83)
Soe	−1.543***	−0.218	0.254***	−0.018
	(-19.85)	(-1.50)	(4.42)	(-0.98)
Top1	0.144	−1.229***	−1.000***	−0.135**
	(0.88)	(-3.89)	(-4.23)	(-2.14)
Top25	−0.188	2.369***	−0.139**	0.006
	(-1.19)	(7.06)	(-2.50)	(0.39)
Boardsize	0.045	−0.311	−0.228	0.022
	(0.42)	(-1.62)	(-1.55)	(0.51)
Independ	−0.272	0.621	0.262	0.425***
	(-0.70)	(1.03)	(0.50)	(2.94)
IMR		−0.014		−0.033
		(-0.15)		(-1.23)
Constant	−1.420***	7.681***	−1.584**	0.931***
	(-3.09)	(8.66)	(-2.51)	(4.83)
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	21,946	21,946	4128	4128
Pseudo R^2	0.198		0.180	
Adj_R^2		0.073		0.138

Notes : Since the Logit model controls for both industry and year fixed effects, all models here control for both industry and year fixed effects for consistency, and the Logit model is Pseudo R^2. T-values are in parentheses. ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included.Standard errors were cluster-adjusted by firm-level.

5.6. Considering fixed effects at the firm level

To mitigate the influence of individual-level variations on the results, this study additionally incorporated firm-level fixed effects as control variables. The findings, presented in Table 14, demonstrate that the coefficient for CEO successor origins (Origin) remains statistically significant and positive at the 1% level. This further substantiates the robustness of the results obtained in this study.

6. CEO successor origin, strategic change, and firm value

The ultimate goal of CEO turnover or corporate strategy change is to enhance corporate performance or value. However, the literature on the relationship between these three factors has produced mixed conclusions. To highlight the significance and contribution of this study, we investigate how the origin of a new CEO influences strategic change and firm value. Building on the works of Luo, Li, & Xiang [65], and Yang and Yin [66], we employ Model (6) to examine the impact of different origins of CEO successors on the relationship between strategic change and firm value.

$$\text{Model } 6 : MV_{it} = \alpha_0 + \alpha_1 \text{Origin}_{it} + \alpha_2 SC_{it} + \alpha_3 \text{Origin}_{it} \times SC_{it} + \alpha_4 \sum Controls_{it} + \delta_i + \delta_t + \varepsilon_{it}$$

where MV_{it} is the firm value variable measured by TobinQ while the other variables are defined as in Model (1). The coefficient α_3 of the interaction term $\text{Origin}_{it} \times SC_{it}$ indicates whether external CEO succession can improve the firm's value, and the results are displayed in Table 15. Column (1) of Table 13 shows that the coefficient of strategic change (SC) is significantly positive at the 1% level, implying that strategic change has a significant positive effect on firm value. However, after further controlling for the interaction term $\text{Origin}_{it} \times SC_{it}$, the coefficient in Column (2) is significantly negative at the 5% level, indicating that the contribution of strategic change to firm value is weakened following external CEO succession. This may be attributed to the disadvantages that external CEO successors encounter as outsiders. Their lack of firm-specific knowledge and internal support [13,67] may lead to TMT turmoil and disrupt internal regulations and operational processes, thereby reducing firm value. Additionally, outside CEOs face greater pressure to demonstrate their competence and are more prone to engage in short-sighted, radical behavior during the strategic change process to prove their worth, thereby exacerbating corporate risks and costs that affect firm value. However, compared to internal CEOs, external

Table 14
Considering fixed effects at the firm level.

Variables	SC
Origin	0.040***
	(2.62)
Size	−0.027***
	(-3.41)
Roa	−3.272***
	(-5.58)
lev	0.293***
	(5.79)
Instihold	0.005
	(0.90)
Soe	0.012
	(0.70)
Top1	−0.145**
	(-2.29)
Top25	0.001
	(0.04)
Boardsize	0.002
	(0.05)
Independ	0.296**
	(2.22)
Constant	1.038***
	(4.96)
Industry FE	YES
Year FE	YES
Firm FE	YES
N	4128
Adj_R^2	0.071

Notes: ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry, Year and Firm fixed effects are included. Standard errors were cluster-adjusted by firm-level.

CEO successors are more likely to break organizational inertia and acquire new information, knowledge, and resources to achieve strategic goals, enhance management efficiency, innovate business models, and improve corporate performance. Therefore, stricter board oversight and greater assistance for outside CEOs to overcome their outsider disadvantages could mitigate their negative impact on strategic change and enhance corporate value.

7. Discussion and conclusions

7.1. Discussion

Motivated by the upper echelons theory and the demographic faultline theory, this paper investigates the direct impact of CEO successor origins on strategic change and the intrinsic mechanism by which different origins of CEO successors influence strategic change through the TMT faultline and explores the moderating role of CEO power and its effect on the TMT faultline.

Previous research has mainly focused on the moderating effect of CEO successors on the relationship between strategic change and firm performance (e.g. Ref. [27]) or the mediating effect of strategic change between CEO successor origins and firm performance [10]. However, the direct impact of a new CEO's origin on strategic change has received less attention. By investigating this direct effect, this study provides a more precise understanding of how top management responds to environmental threats and opportunities in the context of strategic change. It also suggests that the board's preference for CEO successor origin depends on its choice of future corporate strategy.

This study fills a gap in the literature by examining the effect of CEO origins on TMT faultlines in the CEO turnover scenario and the impact of TMT faultlines on team behavioral performance, such as strategy choice and resource allocation. The study demonstrates the mediating effect of TMT faultlines on CEO successor origins and their initiation of strategic change. The change in power structure brought by different successor origins leads to confrontation and conflicts among TMT subgroups, and new CEOs satisfy their desire for power through TMT restructuring, which either promotes or hinders strategic change. The extent of TMT restructuring varies depending on the new CEO's origin, highlighting the critical role of TMTs in the success or failure of strategic change and how the post-restructuring TMT faultline becomes a means for new CEOs to strengthen their authority and implement their strategic vision.

CEO power facilitates the relationship between CEO successor origins and strategic change. Environmental changes faced by firms at the time of external CEO succession compress their survival space, which in turn pushes outside CEO successors to assess and anticipate the threats firms are facing or will face with a view to forming a response strategy. Meanwhile, the diverse team brought by outside CEOs may provide different directions and ideas for strategic change, and CEO power escorts the implementation of their strategies. This result differs from the findings of Zhang et al. [68], who argue that high environmental complexity, poor prior firm

Table 15

Regression results of the relationship between CEO successor origins, strategic change and firm value.

Variables	TobinQ	TobinQ
	(1)	(2)
Origin × SC		−3.639**
		(-2.13)
Origin		0.003
		(0.03)
SC	4.573***	5.005***
	(4.59)	(4.75)
Size	−0.522***	−0.512***
	(-4.81)	(-4.84)
Roa	3.235	4.520
	(0.44)	(0.64)
lev	0.828	0.907
	(1.00)	(1.14)
Instihold	0.167***	0.172***
	(3.62)	(3.77)
Soe	−0.050	−0.135
	(-0.28)	(-0.75)
Top1	−0.298	−0.330
	(-0.48)	(-0.55)
Top25	−0.053	−0.059
	(-0.34)	(-0.39)
Boardsize	−0.750*	−0.781*
	(-1.74)	(-1.82)
Independ	−2.951**	−2.954**
	(-2.04)	(-2.03)
Constant	12.829***	12.431***
	(5.64)	(5.57)
Industry	YES	YES
Year	YES	YES
N	3977	3977
Adj_R^2	0.197	0.219

Notes: Observations differ due to missing values for the variables in question. T-values are in parentheses. ***, **, and * indicate significant at the 1%, 5%, and 10% levels, respectively. Industry and Year fixed effects are included. Standard errors were cluster-adjusted by firm-level.

performance, outside CEO succession, and inadequate power trigger a high degree of strategic change, which is due to the fact that they study the configuration effect of CEO power and the above factors on strategic change, rather than the moderating effect of CEO power on the relationship between CEO successors and strategic change alone in our study.

Our heterogeneity tests for the subsample of SOEs and non-SOEs evidence that CEO turnover itself in SOEs does not trigger TMT restructuring and strategic change, but only combined with other specific contexts, does CEO turnover lead to changes in TMTs and corporate strategies, which can be partially explained by the mechanism of administrative appointments of CEOs and TMT members in Chinese SOEs. In contrast, non-SOEs show a facilitative effect of outside CEO successors on strategic change, a mediating role of the TMT faultline, and a positive moderating effect of CEO power, underscoring the effectiveness of the TMT faultline as a pathway for CEO successor origins to influence strategic change. These findings further highlight the superior corporate governance in non-SOEs compared to SOEs.

Heterogeneity tests for firms at different life cycle stages indicate that external CEO successors promote strategic change in firms at their growth and maturity stages. For growth companies, facing fierce market competition and numerous investment and growth opportunities due to the continuous influx of potential market entrants, external CEOs may pursue relatively radical strategic changes to seize growth opportunities, upgrade technology, and develop markets quickly. Similarly, maturity companies, while maintaining stable competitiveness, face threats and challenges from a dynamic environment and require new perspectives, skills, and external information to drive innovation and organizational learning to maintain their market position and competitive edge. External CEO successors meet their needs and bring in more strategic changes. However, for firms in recession, changing CEOs alone cannot improve their troubled situations. Additionally, our tests reveal that the mediating effect of the TMT faultline is only effective for growth firms, not for maturity firms, as the latter already have efficient and stable TMTs, and even if external CEO succession occurs, there is a narrow chance for TMTs to restructure and the TMT faultline to change and CEO successors are more inclined to take on robust strategies. Increased CEO power helps outside CEO successors in growth companies allocate resources better for strategic changes. For maturity firms, the main goal of successor CEOs and the board of directors is to expand while maintaining stability, and it is difficult to change this strategic orientation no matter how CEOs change.

7.2. Conclusions

This study uses panel data from Chinese A-share listed companies between 2009 and 2020 and provides empirical evidence for the following conclusions. Firstly, CEO successor origin is a crucial variable affecting strategic change. Different origins of CEO successors bring different power structures to organizations, influencing the likelihood of strategic change, with external CEO successors more likely to initiate strategic change. Secondly, the TMT faultline plays a mediating role between CEO successor origin and strategic change with the TMT faultline negatively influenced by different by external CEO succession and negatively influencing strategic change. Thirdly, this study reveals that CEO power reinforces the impact of different CEO successor origins on strategic change.

The above findings are further verified in our heterogeneity tests and robustness tests, but these conclusions do not apply to SOEs, which reveals, to some extent, one of the reasons for the poor corporate governance in SOEs, namely, the administrative appointment mechanism of CEOs and TMT members in SOEs. Further test discovers that external CEO succession weakens the positive effect of strategic change on firm value.

The above empirical results lead us to the following policy recommendations. First, CEO successors with different origins should consider the impact of TMTs in terms of the overall team structure when restructuring and renewing TMTs. Second, in the CEO turnover scenario, succeeding CEOs should promptly restructure TMTs to align with the strategic layout and goals of firms. Third, the board of directors should prudently consider power to be delegated to successive CEOs, balance the power of TMT members, and avoid the negative impact of CEO power. Last but not the least, behavioral regulation should be strengthened when considering outside CEO succession to avoid the reduction of corporate performance due to their overly aggressive strategic change behaviors and more assistance provided for external CEO successors for a better integration into firms.

7.3. Limitations and future research

There are still some limitations in this paper.

It should be noted that the study in this paper is based on a sample of Chinese enterprises, and the conclusions drawn may not be directly applicable to other countries. Future research can expand the sample to include enterprises from more countries and extend the time span appropriately to obtain more generalizable conclusions. It would also be interesting to compare China with other countries and investigate whether the impact of CEO successors on corporate strategic change and the mediating role of TMT faultline are similar across different countries. If there are differences, it would be worthwhile to conduct further in-depth studies to identify the reasons behind them.

Secondly, the TMT faultline measurement used in this paper still follows the approach of previous studies, which is based on demographic attributes. However, other attributes unique to Chinese culture and society, such as geographic, academic, and personality attributes, can also be included as dimensions of the TMT faultline, which warrants further exploration in future research.

Finally, our finding on the inhibitory effect of external CEO successors on the relationship between strategic change and firm value highlights the clear disadvantages that outsiders face. As such, it is crucial for companies and practitioners to explore ways to leverage the outsider strengths of external CEO successors while mitigating their disadvantages. Future research could adopt a cultural integration perspective to investigate how companies can effectively integrate external CEO successors into the organization and create a culture that recognizes and values their unique perspectives and skills, while also fostering a sense of belonging and commitment to the organization.

Declarations

Author contribution statement

Daling Ren: Conceived and designed the experiments; Wrote the paper.
Hui Jiang: Performed the experiments; Analyzed and interpreted the data.
Jingyun Cheng: Contributed reagents, materials, analysis tools or data.
Cheng Peng:Conceived and designed the experiments; Analyzed and interpreted the data.
Yu Zou:Contributed reagents, materials, analysis tools or data.

Data availability statement

Data will be made available on request.

Additional information

No additional information is available for this paper.

Funding

their configuration effects in the scenario of CEO turnover [SISU202310].

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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