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Managerial Cognition Biases and Strategic Renewal in Family-Owned Enterprises

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Abstract

Strategic renewal is a fundamental mechanism through which organizations adapt to shifting environmental conditions, yet family owned enterprises often exhibit paradoxical behaviors when faced with the need to change. While they possess the long-term orientation necessary for sustained investment, their decision-making processes are frequently constrained by the preservation of socioemotional wealth and unique managerial cognition biases. This study investigates the causal mechanisms linking specific managerial cognitive biases namely status quo bias, overconfidence, and the illusion of control to strategic renewal intentions in family owned enterprises. Utilizing a rigorous survey experiment methodology involving decision-makers from numerous family firms, we manipulate the salience of environmental disruption to observe how cognitive biases filter strategic responses. The empirical findings reveal that status quo bias significantly impedes the initiation of strategic renewal, primarily by amplifying risk aversion and the desire to protect non-financial family endowments. Conversely, managerial overconfidence demonstrates a complex, bifurcated effect, prompting excessive commitment to untested strategic initiatives under certain environmental conditions while blinding executives to critical operational feedback. Furthermore, the illusion of control exacerbates path dependency by fostering a false sense of security regarding the firm's legacy operational models. The results contribute to the intersection of upper echelons theory and family business research by providing micro-foundational evidence of how cognitive limitations dictate macroscopic strategic trajectories. Practical implications are provided for corporate governance in family enterprises, particularly regarding the role of independent board members in mitigating executive cognitive biases during periods of industry disruption.

Keywords: Strategic Renewal; Managerial Cognition; Cognitive Biases; Family-Owned Enterprises; Survey Experiment

1. Introduction

1.1 Background on Family Owned Enterprises and Strategic Renewal

The global economic landscape is increasingly characterized by rapid technological advancement, shifting consumer preferences, and volatile geopolitical conditions, necessitating continuous adaptation from all organizational forms. Strategic renewal, defined as the process, content, and outcome of refreshment or replacement of attributes of an organization that have the potential to substantially affect its long-term prospects, is vital for firm survival and prosperity [1]. Among various organizational structures, family owned enterprises represent a unique and dominant pillar of the global economy. These enterprises are fundamentally distinguished by the interwoven nature of family and business systems, which profoundly influences their strategic postures. Unlike non-family firms, where decisions are largely driven by financial wealth maximization, family owned enterprises are heavily guided by the desire to preserve socioemotional wealth. This concept encompasses the non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty [2].

The pursuit of socioemotional wealth creates a complex dynamic when family owned enterprises face the imperative of strategic renewal. On one hand, the long-term orientation inherent in family firms can facilitate patient capital investments required for fundamental transformations. On the other hand, the deep emotional attachment to the legacy of the founder, established business models, and long-standing relationships with specific stakeholders often engenders a profound resistance to change. This resistance is not merely a structural or resource-based constraint but is deeply rooted in the cognitive frameworks of the family managers who hold the ultimate decision-making authority [3]. Consequently, understanding how these unique structural and emotional imperatives translate into cognitive processes is essential for unlocking the black box of strategic decision-making in family businesses.

1.2 Managerial Cognition Biases

Managerial cognition refers to the knowledge structures and information processing mechanisms that executives use to interpret their environment and formulate strategic responses. According to upper echelons theory, strategic choices and organizational outcomes are partially predicted by managerial background characteristics, which serve as proxies for their cognitive bases and values. However, human cognition is inherently bounded, leading to the reliance on heuristics and the manifestation of cognitive biases. Cognitive biases are systematic patterns of deviation from norm or rationality in judgment, whereby inferences about other people and situations may be drawn in an illogical fashion. In the context of family owned enterprises, the concentration of power and the emotional embedding of the business within the family unit amplify the influence of specific cognitive biases [4].

This study focuses on three critical managerial cognition biases: status quo bias, overconfidence, and the illusion of control. Status quo bias is the preference for the current state of affairs, where any change from that baseline is perceived as a loss. In family firms, the baseline is often the legacy business model established by preceding generations, making deviations psychologically costly. Overconfidence, characterized by an unwarranted belief in the accuracy of one's own judgments and abilities, can lead family managers to underestimate environmental threats or overestimate their capacity to manage disruptive changes without altering core strategies. The illusion of control is the tendency for human beings to believe they can control or at least influence outcomes that they demonstrably have no influence over. For family executives who have historically dominated their local markets or supply chains, this illusion can mask the severity of exogenous shocks, delaying necessary strategic renewal efforts [5].

1.3 Research Objectives and Contributions

Despite the recognized importance of managerial cognition in strategic management, empirical research examining the causal effects of specific cognitive biases on strategic renewal within the unique context of family owned enterprises remains scarce. Most existing literature relies on cross-sectional survey data or archival proxies, which struggle to isolate the precise mechanisms through which cognition influences strategic intent, often suffering from endogeneity and reverse causality issues [6]. To address these profound methodological and theoretical gaps, this study employs a survey experiment methodology, commonly referred to as a vignette experiment. By experimentally manipulating strategic scenarios, we can observe the direct impact of activated cognitive biases on the strategic renewal intentions of family firm executives in a controlled yet realistic manner.

This paper makes three substantial contributions to the literature. First, it advances the integration of upper echelons theory and family business research by providing robust, micro-foundational evidence of how specific cognitive biases shape strategic outcomes in family owned enterprises. Second, it untangles the paradoxical effects of different cognitive biases, demonstrating that while status quo bias universally suppresses renewal, overconfidence and the illusion of control yield highly complex, context-dependent effects on strategic risk-taking. Third, by utilizing a survey experiment design, this study introduces methodological rigor to the study of managerial cognition, isolating causal pathways that traditional observational studies cannot capture.

2. Literature Review and Theoretical Framework

2.1 Strategic Renewal in Family Firms

Strategic renewal involves the alteration of an organization's strategic intent and core competencies to ensure long-term alignment with the external environment. It can manifest through various avenues, including the development of new products, entry into new markets, the adoption of novel technologies, or fundamental shifts in the underlying business model. In the context of family owned enterprises, strategic renewal is a highly fraught process. The existing literature highlights a central paradox: family firms are often the most in need of renewal due to the threat of organizational stagnation across generations, yet they are frequently the most resistant to it [7].

This resistance is heavily theorized through the lens of socioemotional wealth. The preservation of socioemotional wealth acts as a primary reference point for family firm decision-makers. When strategic renewal threatens this wealth by requiring the integration of non-family executives, the dilution of family control, or the abandonment of legacy practices closely tied to the family identity the firm is likely to exhibit high levels of risk aversion [8]. However, when the survival of the firm itself is threatened, leading to a potential total loss of both financial and socioemotional wealth, family firms may exhibit sudden and extreme risk-taking behaviors. This behavioral agency perspective suggests that the strategic choices of family owned enterprises are highly sensitive to how environmental changes are framed and perceived by management.

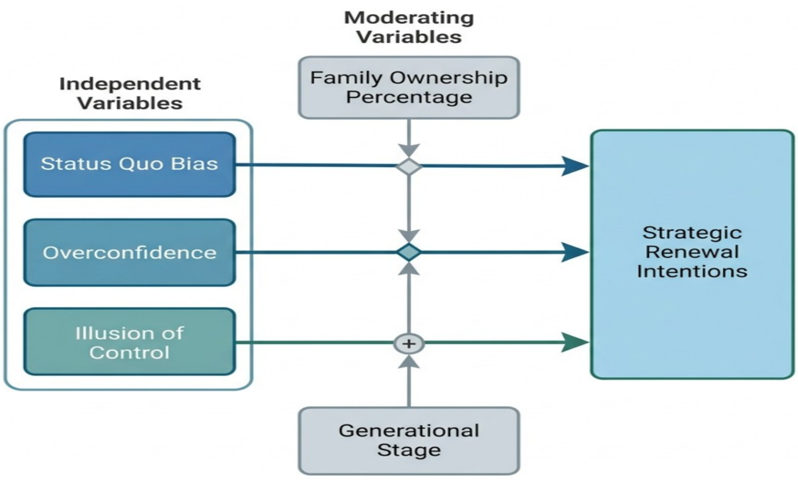

Figure 1: Comprehensive Conceptual Framework

2.2 Upper Echelons Theory and Managerial Cognition

Upper echelons theory posits that organizations are reflections of their top managers. Because environments are complex and ambiguous, executives cannot perfectly scan every aspect of their surroundings. Instead, their strategic decisions are based on their personalized interpretations of the strategic situation, which are filtered through their cognitive bases and values. Managerial cognition, therefore, acts as a crucial mediating variable between objective environmental stimuli and organizational response [9].

In family owned enterprises, the top management team is often heavily dominated by family members, leading to a high degree of cognitive homogeneity. This homogeneity can streamline decision-making processes and foster strong organizational cultures, but it simultaneously restricts the diversity of information processing. When the cognitive frameworks of family executives are outdated or misaligned with current environmental realities, the entire organization is prone to strategic drift. The bounded rationality of these executives necessitates the use of cognitive heuristics, which, while efficient under stable conditions, become significant liabilities during periods demanding strategic renewal. The rigid application of historical success formulas to novel challenges exemplifies how cognitive inertia prevents organizational adaptation [10].

2.3 Specific Cognitive Biases

Status quo bias is arguably the most pervasive cognitive constraint in family owned enterprises. Rooted in loss aversion and the endowment effect, status quo bias dictates that individuals weigh the potential losses from abandoning the current state far more heavily than the potential gains from a new state. In family firms, the status quo is not merely a strategic position; it is a historical artifact embedded with the emotional labor of previous generations. Proposing a radical strategic renewal is often perceived as an implicit criticism of the founders' vision. Consequently, family managers experiencing high status quo bias will systematically under-evaluate the benefits of technological adoption or market diversification, preferring incremental adjustments that do not threaten the established identity of the firm [11].

Overconfidence bias manifests when an executive's subjective confidence in their judgments is reliably greater than the objective accuracy of those judgments. This bias typically presents in three forms: overestimation of one's actual performance, overplacement of one's performance relative to others, and excessive certainty regarding the accuracy of one's beliefs. While moderate overconfidence can be functional by promoting decisive action and entrepreneurial vision, excessive overconfidence in family managers often leads to the dismissal of critical environmental threats. An overconfident family CEO may recognize market disruptions but believe that their superior leadership or the firm's historical resilience will allow them to weather the storm without undergoing fundamental strategic renewal [12]. Alternatively, overconfidence may drive a family firm to pursue overly aggressive and poorly planned renewal strategies, underestimating the resource constraints and implementation challenges.

The illusion of control is the cognitive bias whereby individuals overestimate their ability to bring about desired outcomes in situations governed largely by chance or external forces. Family executives, particularly founders or those who have enjoyed long periods of sustained success, are highly susceptible to this illusion. They may falsely attribute positive market outcomes entirely to their strategic acumen rather than to favorable macroeconomic conditions. When faced with disruptive external changes, such as regulatory shifts or the emergence of radically new technologies, executives suffering from the illusion of control may believe they can manage these threats through existing operational protocols, thereby failing to recognize the necessity for deep strategic renewal [13].

2.4 Hypothesis Development

Based on the preceding synthesis of upper echelons theory and family business literature, we develop several hypotheses regarding the impact of managerial cognition biases on strategic renewal intentions.

First, regarding status quo bias, the strong emotional attachment to legacy business models and the desire to protect non-economic family endowments will systematically diminish the perceived value of strategic change. Therefore, it is hypothesized that status quo bias is negatively associated with strategic renewal intentions in family owned enterprises.

Second, the effect of overconfidence is theoretically complex. While it might suppress renewal by causing managers to dismiss external threats, the prevailing view in entrepreneurial studies suggests that highly overconfident managers are more likely to initiate bold, albeit sometimes ill-advised, strategic shifts because they underestimate the associated risks of failure. Therefore, we hypothesize a positive relationship between managerial overconfidence and the propensity to initiate high-variance strategic renewal initiatives.

Third, the illusion of control fosters a dangerous complacency. Executives who believe they have absolute mastery over their operating environment will not perceive the urgency of adapting to exogenous shocks. They will attempt to force new environmental realities into old operational paradigms. Consequently, we hypothesize that the illusion of control is negatively associated with strategic renewal intentions.

Finally, we anticipate that the structural characteristics of the family firm will moderate these cognitive effects. Specifically, the level of family ownership and the generational stage of the firm will influence the strength of the cognitive biases. Firms with higher family ownership are likely to exhibit stronger emotional attachments to the firm, thereby amplifying the negative effects of status quo bias on strategic renewal.

3. Methodology and Survey Experiment Design

3.1 Research Design and Vignette Methodology

To rigorously test the theoretical hypotheses and establish causal relationships between managerial cognition biases and strategic renewal intentions, this study employs a survey experiment design. Traditional survey research in strategic management often struggles to capture the immediate, unconscious cognitive processes that drive executive decisions, relying instead on retrospective self-reports which are highly susceptible to recall bias and social desirability bias [14]. The survey experiment, or vignette methodology, overcomes these limitations by presenting respondents with carefully constructed, hypothetical yet highly realistic business scenarios. By experimentally manipulating specific contextual variables within the vignettes, researchers can observe the direct effects of these manipulations on the respondents' decision-making processes in real-time.

The core of our research design involves a 2x2x2 between-subjects factorial design. The vignettes place the respondent in the role of a CEO of a mid-sized family owned enterprise facing a significant industry disruption caused by the rapid adoption of artificial intelligence by key competitors. The experimental manipulations are embedded within the narrative of the vignette to subtly prime the cognitive biases under investigation. For instance, to manipulate status quo bias, half of the respondents receive a vignette emphasizing the profound historical legacy and deep emotional connections the family has with the current product line (high status quo priming), while the other half receives a vignette describing a more pragmatic, financially oriented relationship with the firm's assets (low status quo priming). Similar linguistic and contextual manipulations are utilized to prime overconfidence and the illusion of control.

3.2 Sample Selection and Data Collection

The target population for this study consists of top-level executives, specifically Chief Executive Officers and Managing Directors, of family owned enterprises. A firm was classified as a family owned enterprise if a single family or a group of related families held at least fifty percent of the voting shares and had strategic control over the organization. To ensure a robust and representative sample, we partnered with several national chambers of commerce and family business associations to distribute the survey instrument.

The data collection process was conducted digitally over a period of three months. Potential respondents were sent a personalized email outlining the academic nature of the study, ensuring strict confidentiality, and providing a secure link to the online survey platform. To mitigate self-selection bias and encourage participation, a summary report of the aggregate findings was offered to all respondents upon completion of the study. A total of twelve hundred invitations were distributed. Following rigorous data cleaning procedures, which involved removing incomplete responses, responses that failed attention checks, and respondents who completed the survey in an impossibly short timeframe, the final sample consisted of four hundred and fifty valid responses. This sample size provides sufficient statistical power to detect medium effect sizes within our factorial design [15].

3.3 Operationalization of Variables

The dependent variable in this study is Strategic Renewal Intention. Following the presentation of the vignette, respondents were asked to evaluate their likelihood of pursuing five distinct strategic actions on a seven-point Likert scale ranging from strongly disagree to strongly agree. These actions included reallocating a significant portion of the budget to research and development, initiating the search for external technological partnerships, fundamentally redesigning the core product architecture, hiring non-family executives with specialized technological expertise, and divesting from legacy product lines. The responses to these five items were averaged to create a composite index of strategic renewal intention, which demonstrated excellent internal reliability during pre-testing.

The independent variables are the manipulated cognitive biases: Status Quo Bias, Overconfidence, and Illusion of Control. Each bias was treated as a binary categorical variable, representing the high and low priming conditions randomly assigned to the participants. To ensure the efficacy of the manipulations, manipulation check questions were included immediately following the vignette. For example, to verify the overconfidence manipulation, respondents were asked to rate their perceived ability to outperform industry peers in managing the described crisis.

Several control variables were included in the empirical models to account for observable heterogeneity among the responding firms and executives. Firm Age was measured as the number of years since the firm's founding. Firm Size was operationalized as the natural logarithm of the number of full-time employees. Past Financial Performance was captured using a subjective measure where respondents rated their firm's profitability relative to industry competitors over the previous three years. Family Ownership Percentage was measured as the exact percentage of equity held by the controlling family. Finally, Executive Tenure was measured as the number of years the respondent had served in their current top management role.

3.4 Analytical Procedures

The data analysis was conducted in several systematic phases. First, descriptive statistics and bivariate correlations were calculated to examine the fundamental characteristics of the sample and to ensure that multicollinearity among the continuous control variables was not a significant concern. Next, independent samples t-tests were utilized to evaluate the success of the experimental manipulations, comparing the mean scores on the manipulation check items between the high and low priming groups for each cognitive bias.

The primary hypotheses were tested using ordinary least squares regression analysis. The composite score of strategic renewal intention was regressed on the binary variables representing the cognitive bias manipulations, alongside the full suite of firm and executive-level control variables. The baseline model included only the control variables to establish the proportion of variance explained by structural factors. Subsequent models sequentially introduced the main effects of status quo bias, overconfidence, and the illusion of control. Finally, to test the moderating effects, interaction terms were constructed by multiplying the cognitive bias variables by the mean-centered continuous moderating variables, such as family ownership percentage [16]. All statistical analyses were conducted utilizing robust standard errors to correct for potential heteroscedasticity in the error terms.

4. Results and Empirical Analysis

4.1 Descriptive Statistics and Manipulation Checks

The descriptive statistics and zero-order correlations for all continuous variables utilized in the analysis are presented in Table 1. The average firm in the sample has been operating for forty-two years, indicating a substantial representation of multi-generational family enterprises. The average family ownership stake is exceptionally high at eighty-five percent, underscoring the concentrated control typical of the firms under investigation. A review of the correlation matrix reveals that none of the bivariate correlations among the independent variables exceed the threshold that would indicate severe multicollinearity, thereby satisfying the assumptions necessary for robust ordinary least squares regression.

Table 1: Descriptive Statistics and Correlation Matrix

Variables	Mean	Standard Deviation	1	2	3	4	5
1. Strategic Renewal Intention	4.12	1.34	1.00				
2. Firm Age	42.50	25.30	-0.15	1.00			
3. Firm Size (Log)	4.85	1.12	0.22	0.45	1.00		
4. Past Performance	5.20	0.95	0.10	0.12	0.25	1.00	
5. Family Ownership %	85.40	14.20	-0.28	0.35	-0.10	0.05	1.00

Prior to testing the main hypotheses, the efficacy of the vignette manipulations was assessed. The independent samples t-tests confirmed that the experimental treatments successfully induced the intended cognitive states. Respondents assigned to the high status quo bias condition reported significantly stronger emotional attachments to the firm's legacy practices compared to those in the low condition. Similarly, executives exposed to the overconfidence and illusion of control primes demonstrated significantly higher scores on the respective manipulation check scales, validating the methodological rigor of the survey experiment design.

4.2 Main Effect Analysis

The results of the ordinary least squares regression analyses predicting strategic renewal intention are detailed in Table 2. Model 1, the baseline model, includes only the control variables. It reveals that larger firm size is positively associated with strategic renewal intentions, potentially due to the availability of slack resources necessary for initiating complex change programs. Conversely, a higher percentage of family ownership demonstrates a significant negative relationship with strategic renewal intentions, providing baseline support for the socioemotional wealth preservation perspective [17].

Table 2: Regression Results for Strategic Renewal Intentions

Variables	Model 1 (Controls)	Model 2 (Main Effects)	Model 3 (Interactions)
Firm Age	-0.04	-0.02	-0.01
Firm Size (Log)	0.18	0.15	0.14
Past Performance	0.05	0.04	0.03
Family Ownership %	-0.25	-0.22	-0.20
Status Quo Bias (High=1)		-0.45	-0.42
Overconfidence (High=1)		0.32	0.28
Illusion of Control (High=1)		-0.38	-0.35
Status Quo x Family Own.			-0.28
R-squared	0.12	0.35	0.41
Adjusted R-squared	0.10	0.33	0.39

Model 2 introduces the primary experimental variables representing the cognitive biases. The inclusion of these variables results in a substantial and statistically significant increase in the explanatory power of the model. The coefficient for Status Quo Bias is strongly negative and statistically significant, confirming the first hypothesis. Family executives who were cognitively primed to focus on historical legacies and the preservation of the current state exhibited a marked reluctance to endorse strategic renewal initiatives, despite being presented with severe technological disruptions in the experimental scenario. This validates the premise that cognitive entrenchment acts as a formidable barrier to organizational adaptation.

The coefficient for Overconfidence is positive and statistically significant. This finding supports the second hypothesis and aligns with the behavioral perspective that overconfident executives often systematically underestimate the risks and resource requirements associated with radical strategic shifts. Believing in their superior capability to execute complex transformations, overconfident family managers are more likely to express intentions to aggressively restructure product lines and enter new markets. However, while they demonstrate high renewal intent, the ultimate effectiveness and rationality of these intended strategies remain highly questionable.

The empirical analysis also confirms the third hypothesis. The Illusion of Control exhibits a significant negative relationship with strategic renewal intentions. Executives who were manipulated to feel a high degree of control over exogenous environmental variables were significantly less likely to initiate fundamental changes. This indicates that the illusion of control generates a hazardous level of complacency. By falsely attributing the power to manage external disruptions through existing internal operational levers, these managers fail to recognize the structural obsolescence of their current strategic posture.

4.3 Moderating Effects and Robustness Checks

Model 3 incorporates the interaction terms to explore the moderating role of structural family firm characteristics. The interaction between Status Quo Bias and Family Ownership Percentage is negative and highly significant. This suggests that the detrimental effect of status quo bias on strategic renewal is severely amplified in firms where the family maintains near-total equity control. In these hyper-concentrated ownership structures, the alignment between family identity and corporate strategy is so profound that any cognitive resistance to change is structurally reinforced by the lack of external shareholder pressure [18].

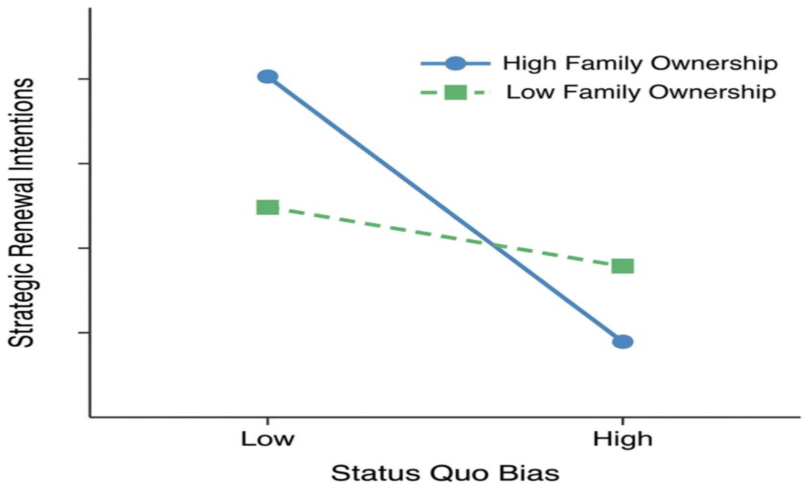

Figure 2: Interaction Plot of Moderating Effects

To ensure the reliability and validity of the empirical findings, extensive robustness checks were conducted. First, the analysis was rerun utilizing an alternative operationalization of the dependent variable. Instead of a composite index, the individual Likert scale items were modeled using ordered probit regressions. The direction and significance of all primary coefficients remained consistent with the ordinary least squares results. Second, to address concerns regarding the influence of extreme responses, the data was winsorized at the first and ninety-ninth percentiles. The re-estimated models demonstrated negligible changes in the coefficient estimates. Finally, non-parametric bootstrapping with one thousand replications was employed to calculate confidence intervals for the main effects, providing further statistical confidence that the observed relationships are robust and not artifacts of specific distributional assumptions within the sample data.

5. Discussion and Conclusion

5.1 Theoretical Implications

This research endeavor set out to untangle the complex relationship between managerial cognition biases and strategic renewal intentions within the unique context of family owned enterprises. By leveraging a rigorous survey experiment methodology, the study transcends the limitations of traditional correlational research, providing compelling causal evidence of how specific cognitive filters dictate organizational adaptation. The findings offer profound theoretical implications for both upper echelons theory and family business literature.

Primarily, the study refines the application of socioemotional wealth theory. While existing literature posits that the desire to preserve socioemotional wealth generally leads to risk aversion, our findings illuminate the cognitive micro-foundations of this phenomenon. We demonstrate that socioemotional wealth preservation is cognitively manifested and enforced through status quo bias. The emotional endowment of legacy systems makes the cognitive cost of strategic renewal prohibitive for family managers. Furthermore, the bifurcated effects of overconfidence and the illusion of control reveal that cognitive biases do not uniformly suppress action. Overconfidence can paradoxically stimulate high-risk strategic renewal by blinding managers to implementation hurdles, whereas the illusion of control stifles innovation by engendering false environmental mastery. This necessitates a more nuanced, multidimensional approach to studying managerial cognition, moving beyond generic constructs of cognitive rigidity.

5.2 Practical Implications

The empirical insights derived from this study offer critical practical guidance for corporate governance and strategic management within family owned enterprises. The pronounced detrimental impact of status quo bias and the illusion of control on strategic renewal highlights a systemic vulnerability in family firms managed exclusively by family members. To counteract these cognitive rigidities, family firms must institutionalize governance mechanisms that mandate cognitive diversity. The integration of independent, non-family directors onto the board is not merely a mechanism for financial oversight, but a crucial strategic imperative. Independent directors can serve as cognitive disruptors, challenging historical assumptions, actively mitigating the illusion of control by providing objective environmental assessments, and forcing the top management team to confront uncomfortable environmental realities.

Furthermore, family business leaders must engage in active cognitive de-biasing techniques during strategic planning processes. Techniques such as structured scenario planning, pre-mortem analysis, and the formal separation of emotional family legacy discussions from strategic operational reviews can help compartmentalize socioemotional wealth preservation, preventing it from paralyzing necessary strategic renewal. Educating next-generation leaders on the psychological mechanisms of cognitive biases will also equip them to recognize and override their own bounded rationality when assuming ultimate decision-making authority.

5.3 Limitations and Future Research

Despite the methodological rigor introduced by the survey experiment design, this study is not without limitations. First, while vignettes allow for precise manipulation and causal inference, they present hypothetical scenarios. The cognitive processes activated in a simulation may differ in intensity from those experienced during a genuine organizational crisis where real financial and socioemotional capital is at stake. Future research should attempt to triangulate these experimental findings with longitudinal archival studies or real-time ethnographies of family firms undergoing industry disruptions.

Second, the study operationalizes strategic renewal as an intention rather than a completed action. While behavioral psychology firmly establishes intention as the most robust predictor of actual behavior, the complex structural realities of organizational life mean that intended strategies are not always successfully implemented. Future scholars could extend this theoretical framework by examining how cognitive biases influence not only the initiation but also the sustained execution and ultimate performance outcomes of strategic renewal processes. Finally, while the sample was robust, exploring cross-cultural variations in how family managers experience and act upon cognitive biases presents a fertile ground for future academic inquiry, as cultural norms regarding authority, uncertainty avoidance, and family duty likely interact significantly with managerial cognition.

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