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Article

A Behavioral Theory of Market Retrenchment: Role of Changes in Market Shares and Market Attractiveness

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Abstract

The behavioral theory of the firm explains how firms react to performance feedback, yet little is known about how firms integrate backward-looking feedback with forward-looking assessments of market opportunity. This study proposes and tests a retrenchment model grounded in SWOT-based behavioral logic via the TOWS matrix. Changes in market share are conceptualized as an internal strength or weakness, and market attractiveness, as an external opportunity or threat. Using prefecture-level panel data on Japanese life insurance companies (2006–2019), the analysis showed that market attractiveness served as a cognitive frame that shapes a firm's response to performance signals. In attractive markets (opportunity), firms reduced retrenchment, as share gains (strength) were leveraged and losses (weakness) triggered problem-solving. Conversely, in unattractive markets (threat), firms accelerated retrenchment, as losses (weakness) confirmed the need to exit and gains (strength) enabled a profitable withdrawal. The study extends behavioral theory by showing that the strategic meaning of an internal strength or weakness depends on the external context of an opportunity or threat. This mechanism helps explain why firms sometimes persist after failure and retrench after success. Practically, the findings offer a diagnostic framework that helps managers assess market portfolios and mitigate behavioral biases in resource allocation decisions.

Keywords: bounded rationality; cognitive frame; resource allocation; SWOT analysis; TOWS matrix; attention-based view; performance feedback; regional market; Japanese life insurance companies



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1. Introduction

Managers frequently make strategic resource allocation decisions by choosing from multiple options under conditions of uncertainty. The behavioral theory of the firm offers valuable insights into these processes (Cyert & March, 1963). A central tenet of this theory is performance feedback, a mechanism whereby firms evaluate their performance against aspiration levels to guide subsequent actions. Research building on this tenet has demonstrated that deviations from aspiration levels—often measured through indicators such as market share—influence corporate actions such as interfirm network formation (Baum et al., 2005), firm growth (Greve, 2008), and new product introduction (Joseph & Gaba, 2015). Separately, Greve (1998) treated regional market share as a reflection of market position, showing that changes in this position relative to aspiration levels drive subsequent organizational change. Such responses occur because boundedly rational managers often simplify their assessment of market performance, frequently converting it into measures of market share changes (Cyert & March, 1963). Consequently, firms tend to be more motivated to initiate organizational change when their market share falls below their aspira-

tion levels. Conversely, exceeding these aspirations can lead to satisficing with the current situation and reduced extent of change (Jordan & Audia, 2012). In parallel, research has indicated that shifts in regional market attractiveness can stimulate subsequent market expansion efforts by firms (Barreto, 2012).

Research grounded in the behavioral theory of the firm has predominantly focused on how backward-looking performance feedback, such as a decline in market share, triggers problemistic search and organizational change (Arrfelt et al., 2013). Barreto (2012) advanced a complementary, forward-looking perspective, demonstrating that market attractiveness stimulates market expansion. Although Barreto's (2012) work highlights an opportunity-driven logic for expansion, less is known about how managers integrate these two often-conflicting signals—particularly when making retrenchment decisions. This gap in the literature points to a critical managerial dilemma: does a loss in market share signal a need to persist in a promising market, or does it justify withdrawing from an unpromising one? The behavioral theory of the firm is largely silent on how managers resolve this ambiguity.

This study addresses this gap by conceptualizing market retrenchment as a decision process that integrates backward-looking performance feedback with forward-looking assessments of market opportunity. To analyze this integrative process, this study applies the classic SWOT framework as a theoretical lens. To structure this lens for strategy inference, the analysis follows the TOWS formulation, which systematically matches external opportunity/threat with internal strength/weakness to derive strategic options (Wehrich, 1982). Within this framework, market attractiveness is conceptualized as an external opportunity or threat, and a change in market share is framed as an internal strength or weakness. This framing enables a systematic examination of how managers synthesize these internal and external signals when making market retrenchment decisions, thereby extending the behavioral theory of the firm.

Research grounded in the behavioral theory of the firm has largely focused on proactive behaviors such as risk-taking, innovation, mergers and acquisitions, and strategic change (Shinkle, 2011). However, the dynamics of market retrenchment remain less understood, with a few notable exceptions. For instance, Shimizu (2007) analyzed the divestment of previously acquired units, and Vidal and Mitchell (2015) examined how performance feedback influences divestitures. This theoretical lens has recently been applied to the reshoring of manufacturing activities, which demonstrates that nonfinancial metrics, such as environmental performance, can also trigger these decisions (Zhang et al., 2023). Although allocating excessive resources to a market can lead to inefficiencies (Arrfelt et al., 2013), managers may hesitate to withdraw because such actions compel them to acknowledge prior human or financial losses (Staw, 1976). This managerial tension highlights the need for a clearer theoretical framework. Accordingly, this study investigates which market signals managers focus on, how they interpret these signals, and how the interaction between these interpretations shapes market retrenchment decisions.

The study contributes to the literature in three primary ways. First, it extends the behavioral theory of the firm to the under-researched context of market retrenchment by examining the interplay of backward-looking performance and forward-looking opportunity. Second, the study theorizes and empirically tests how market attractiveness acts as a cognitive frame that shapes the interpretation of performance feedback. Third, the findings offer a structured, analytical framework for managers navigating complex resource allocation decisions, grounded in the systematic assessment of internal strength/weakness (performance) and external opportunity/threat (attractiveness).

The remainder of this paper is structured as follows. The theoretical background is first reviewed to develop the hypotheses. Next, the research methods and data are de-

scribed, followed by the presentation of the results. The paper concludes with a discussion of the theoretical and practical implications, limitations, and avenues for future research.

2. Theory and Hypotheses

2.1. *The Behavioral Theory of the Firm*

The behavioral theory of the firm is an influential framework for understanding organizational decision-making (Audia & Greve, 2021). A central tenet of this theory is performance feedback, which posits that firms evaluate their performance against aspiration levels to guide subsequent actions (Cyert & March, 1963). This feedback mechanism is fundamental to how the theory explains key organizational behaviors such as problem-driven search, resource allocation, and strategic change. An aspiration level represents the minimum outcome a decision-maker considers satisfactory and is typically categorized into two forms: historical aspiration levels, based on the firm's own past performance, and social aspiration levels, based on the performance of comparable peer firms (Audia & Greve, 2021; Greve, 2003b). Performance relative to these aspiration levels serves as a primary driver of organizational change and resource allocation strategies.

Although performance feedback can draw on social or historical aspirations, a growing body of research challenges the view that these two forms of comparison affect firm behavior similarly, suggesting they can lead to different firm behaviors (Kim et al., 2015). In the context of market-level retrenchment, direct social comparisons of regional market shares can offer little actionable insight, as social aspiration levels are often considered an ambiguous benchmark for performance (Kim et al., 2015). A firm's market share in a specific geographic market is heavily influenced by its unique history, size, and sales network density. For example, a company with a long-standing presence in a region may have built a loyal customer base and brand recognition over decades, creating advantages a newer firm cannot easily replicate.

For instance, if a peer firm holds a 30% market share while the focal firm holds only 10%, this gap offers little actionable insight for performance evaluation. The significant difference is more likely a reflection of the peer's long-standing historical advantages than a meaningful measure of current competitive performance. Indeed, achieving a 10% share could be a significant success for a firm that has recently entered the market. In contrast, for a firm that has long been dominant in that region, even its 30% share could signify failure if it represents a decline from a previous position. In such contexts, a firm's own market share change within a specific region—that is, its historical aspiration—provides a more direct and managerially interpretable benchmark (Greve, 1998; Ocasio, 1997), as it is derived from the firm's own history and reflects its unique capabilities and resources (Greve, 2003a; Kim et al., 2015). This reasoning is consistent with this study's empirical findings. Specifically, a robustness check using social aspiration levels (the deviation from the average market share of competitors) yielded no significant results. This finding suggests that, in this context, managers are more attuned to their firm's own market share changes than to social comparisons.

The relative salience of social versus historical aspirations is also contingent on market structure. In markets with standardized products and low customer switching costs, social comparison is highly informative. In contrast, where competition hinges on idiosyncratic, geographically embedded assets—such as dense sales networks—managerial attention turns inward. Learning from direct experience is more reliable than learning from competitors, particularly when the drivers of their performance are unobservable (Kim & Miner, 2007; Kim et al., 2015; Menon & Pfeffer, 2003). The Japanese life insurance industry, the empirical setting for this study, exemplifies this latter context. Consequently, a firm's own historical performance offers a more diagnostic and actionable signal than comparisons with rivals operating with different resources and histories. This provides a strong justification for this study's focus on historical aspirations.

The behavioral theory of the firm applies not only to broad, firm-level goals, such as return on assets (ROA) and firm size, but to more specific action goals, such as performance in a particular business unit or regional market (Kim et al., 2015). As an extension of this framework, the attention-based view posits that organizations simplify decision-making by selectively focusing managerial attention on salient issues, such as performance shortfalls or significant market opportunity. While the behavioral theory of the firm has been widely used to explain proactive behaviors such as innovation and strategic change, its application to retrenchment and strategic reduction remains a developing area of inquiry. For example, recent studies have applied the theory to explain firms' decisions regarding the reshoring of manufacturing activities based on environmental performance feedback (Zhang et al., 2023) and reductions in environmental, social, and governance (ESG) disclosures in response to negative financial performance (Seow, 2025). Building on these foundations, this study applies these core principles to understand the decision-making processes that drive market retrenchment.

2.2. Market Attractiveness as a Cognitive Frame: An Attention-Based View

Within the attention-based view, prior research has indicated that market attractiveness directs managerial attention (Barreto, 2012). Extending this insight, market attractiveness is proposed to serve as a cognitive frame—an interpretive schema managers use to make sense of complex situations and to contextualize performance feedback (Kaplan, 2008). Framing determines which performance signals managers notice and how they interpret them, thereby altering strategic responses to gains and losses (Ocasio, 1997; Joseph et al., 2024). Recent research has also shown that perceived control—managers' assessment of their ability to influence discontinuous change in the current and anticipated competitive context—can relax resource rigidity and shape whether performance signals are construed as problems to solve or confirmations to withdraw (König et al., 2021). Within the attention-based view, this mechanism guides strategic choices in response to environmental and performance cues (Ocasio, 1997; Joseph et al., 2024).

A performance shortfall in a market perceived as highly attractive and aligned with firm objectives is likely to trigger a problem-solving response aimed at recovery. The same shortfall in a market deemed unattractive and less aligned with strategic goals is more likely to be interpreted as a confirmatory signal to withdraw. Thus, attractiveness does not merely moderate the relationship between performance and retrenchment; it shapes the fundamental cognitive process by which managers evaluate and act upon performance signals, as developed in the subsequent hypotheses.

This study posits that market retrenchment decisions result from interpreting backward-looking performance signals through the cognitive frame of forward-looking market attractiveness. To analyze this integration, the classic SWOT lens is adopted. In this lens, market attractiveness is treated as an external opportunity or threat, and changes in market share, as internal strength or weakness. Accordingly, the following hypotheses explain how managers synthesize these internal and external signals when deciding on market retrenchment. This synthesis aligns with the TOWS matrix logic, which pairs external opportunity or threat with internal strength or weakness to identify four canonical strategic tendencies (SO, WO, ST, WT). In the present context, high market attractiveness (opportunity) combined with either a share gain (strength) or a share loss (weakness) was expected to reduce retrenchment, whereas low market attractiveness (threat) combined with the same signals was expected to increase retrenchment, albeit through different mechanisms (Wehrich, 1982). While SWOT is widely adopted, prior research has noted that list-based applications often lack prioritization and analytical depth; as Pickton and Wright (1998) emphasize, SWOT in its basic form offers limited guidance for ranking factors, and the

TOWS formulation addresses this limitation by systematically matching internal and external factors in a matrix to generate prioritized, actionable strategic options.

2.3. Research Context: The Japanese Life Insurance Industry

The Japanese life insurance industry offers an instructive context for examining market retrenchment decisions. Historically, life insurance distribution in Japan has centered on face-to-face interactions. During the country's period of high economic growth, major insurance companies substantially expanded their physical presence by establishing extensive nationwide networks of sales offices.

However, the economic landscape changed significantly following the collapse of Japan's asset bubble in the early 1990s. This economic shift, coupled with long-term demographic trends, accelerated depopulation in rural regions. The nation's working-age population peaked in 1995 and has since declined because of an aging society and a low birthrate. This demographic trend has been more pronounced in rural areas than in urban centers. Life insurance products primarily provide financial protection for bereaved families. Therefore, a shrinking customer base, and particularly the decline in households with children—a core market segment—has diminished the attractiveness of a regional market.

Consequently, life insurance companies that had previously invested heavily in extensive national networks began to strategically consolidate or close sales offices in these less profitable regional markets to improve operational efficiency. This strategic consolidation, a key form of market retrenchment, presents a compelling empirical setting for analyzing how declining regional market attractiveness and firm performance influence retrenchment strategies.

2.4. Market Attractiveness and Market Retrenchment

The attention-based view of the firm posits that because managerial attention is a scarce resource, decision-makers selectively focus on salient environmental cues that align with organizational objectives (Cyert & March, 1963; Ocasio, 1997; Joseph et al., 2024). While much of the literature emphasizes backward-looking performance feedback, a complementary forward-looking perspective suggests that assessments of future opportunity also guide strategic action (Chen, 2008). Market attractiveness is a primary guide for such forward-looking assessments. Using the classic opportunity–threat logic, market attractiveness determines whether a market is framed as an external opportunity or a threat. This opportunity–threat mapping corresponds to the TOWS matrix, which systematizes the pairing of external context with internal strength/weakness to derive SO, WO, ST, and WT tendencies (Wehrich, 1982; Pickton & Wright, 1998).

A highly attractive market is therefore framed as an opportunity. It signals valuable growth prospects and profit potential, making the market highly salient and worthy of managerial attention and resources (Barreto, 2012). This opportunity-driven logic motivates firms to protect their position and invest further to capitalize on future gains, rendering retrenchment an undesirable strategic option. Conversely, a market with low attractiveness is framed as a threat, prompting withdrawal. This logic suggests a direct, inverse relationship between a market's perceived attractiveness and a firm's likelihood of retrenchment. Accordingly, the following hypothesis was proposed:

Hypothesis 1. *The higher the market attractiveness, the lower a firm's market retrenchment.*

2.5. Market Share Changes in Markets with Average Attractiveness

This subsection examines how year-over-year changes in market share—an internal performance signal—influence a firm's retrenchment decisions in markets of average attractiveness. Such markets present an ambiguous strategic context: the forward-looking

signal from market attractiveness is neither strong enough to compel major new investment (a clear opportunity) nor weak enough to mandate an immediate exit (a clear threat). This ambiguity elevates the importance of backward-looking performance feedback, yet its interpretation becomes contentious (Eggers & Suh, 2019).

In such an ambiguous context, a market share loss, viewed as an internal weakness, presents managers with conflicting signals (Audia & Greve, 2021). One perspective, drawing from the behavioral theory of the firm, frames the loss as a performance shortfall that triggers problemistic search for a solution (Cyert & March, 1963; Greve, 2003b), motivating actions to recover the lost share and thereby decreasing retrenchment. An alternative interpretation, however, frames the same weakness as confirmation to withdraw; managers may view the loss as evidence of an eroding competitive position, suggesting the rational response is to cut losses and increase retrenchment to avoid an inefficient escalation of commitment (Staw, 1976, 1981; Thywissen, 2015). Because the market's strategic value offers no clear guidance (Kaplan, 2008), these competing pressures were expected to offset each other, leading to no systematic change in retrenchment on average.

Hypothesis 2. *When market attractiveness is at an average level, a loss in market share relative to the previous year leads to no change in market retrenchment.*

In contrast, a market share gain, viewed as an internal strength, generates more consistent managerial motivations that argue against market retrenchment. This proposition is supported by two convergent theoretical perspectives. First, from a behavioral perspective, a share gain signifies performance that exceeds aspirations, which engenders managerial satisfaction and fosters a preference for the status quo (Audia & Greve, 2021; Greve, 1998). Second, a gain signals a firm's competitive advantage in that market (Porter, 1980), motivating managers to consolidate their position and build on this success—for instance, by investing in long-term advantages (Han, 2023)—rather than to retreat. Unlike the conflicting pressures arising from a share loss, these two managerial responses converge to provide a robust motivation to resist, and therefore decrease, market retrenchment.

Hypothesis 3. *When market attractiveness is at an average level, a gain in market share relative to the previous year decreases market retrenchment.*

2.6. Market Share Changes in Markets with High and Low Attractiveness

This subsection explores how market attractiveness shapes the interpretation of market share changes. Acting as a cognitive frame (Kaplan, 2008), attractiveness determines how an internal weakness (a share loss) or strength (a share gain) is interpreted through the external context of either an opportunity (high attractiveness) or a threat (low attractiveness), leading to contrasting strategic responses. Formally, the hypotheses implement a TOWS mapping: in opportunity contexts (high attractiveness), internal signals coded as strength or weakness tend to reduce retrenchment, whereas in threat contexts (low attractiveness) the same signals tend to increase retrenchment via distinct mechanisms (Wehrich, 1982).

Consider a firm that has experienced a market share loss. When this internal weakness occurs in a highly attractive market framed as an opportunity, managers are unlikely to interpret the loss as a signal for retrenchment. Instead, the loss is likely to be framed as a localized problem to be solved to protect and capitalize on a valuable market position, triggering problemistic search aimed at recovery (Cyert & March, 1963). Consequently, a share loss is expected to decrease market retrenchment. In contrast, when a share loss occurs in a market with low attractiveness framed as a threat, it serves as a confirmatory signal reinforcing the rationale for exit (Harrigan, 1980). Perceived threat can evoke strong negative emotions, which in turn narrow managerial attention and bias decision-making

toward conservative actions such as withdrawal (Vuori & Huy, 2016). In this context, allocating resources to defend or regain share is perceived as inefficient, prompting an increase in market retrenchment (Bettis & Mahajan, 1985).

Hypothesis 4. *When market attractiveness is at a high (low) level, a loss in market share relative to the previous year decreases (increases) market retrenchment.*

Consider a firm that has achieved a market share gain (an internal strength). When this strength occurs within a highly attractive market framed as an opportunity, the rationale for decreasing market retrenchment is reinforced. The convergence of positive signals—an attractive market (Barreto, 2012; Porter, 1980) and improved performance (Greve, 1998)—strengthens managerial confidence and the willingness to invest further. The situation differs in a market with low attractiveness, framed as a threat. In this context, a share gain may paradoxically lead to increased retrenchment. This outcome can be explained by two distinct managerial logics. First, managers may adopt a “harvest and exit” strategy, viewing the improved position as a strategic window for a more profitable withdrawal (Bettis & Mahajan, 1985; Harrigan, 1980). Second, constrained by bounded rationality (Cyert & March, 1963), managers may conclude that the resources required to build upon the gain are disproportionate to the market’s low potential, thereby highlighting the opportunity cost of remaining.

Hypothesis 5. *When market attractiveness is at a high (low) level, a gain in market share relative to the previous year decreases (increases) market retrenchment.*

Table 1 summarizes the hypotheses regarding the effects of market share changes and market attractiveness on market retrenchment. “Increases” and “Decreases” indicate a hypothesized increase and decrease, respectively, in market retrenchment. “No change” indicates Hypothesis 2, that market retrenchment will not change under specific conditions.

Table 1. Effects of market attractiveness and market share changes on market retrenchment.

	Loss in Market Share	Gain in Market Share
High Market Attractiveness	Decreases (H4)	Decreases (H5)
Average Market Attractiveness	No change (H2)	Decreases (H3)
Low Market Attractiveness	Increases (H4)	Increases (H5)

3. Methods

3.1. Data and Sample

Data on sales activities in the 47 prefectures and firm-level data were obtained from the annual editions of *Statistics of Life Insurance Business in Japan*, published by Hoken Kenkyujo Ltd. Because this publication is sold only in print, the author manually digitized the data. In addition, demographic data for each prefecture were obtained from a database provided by the Ministry of Internal Affairs and Communications.

The initial dataset was acquired from 2006 to 2019. Data from the boundary years of 2006 and 2019 were used exclusively to calculate independent and dependent variables derived from year-over-year differences. This study investigates the extent to which life insurance companies, already established in a regional market, reduced their number of sales offices. To operationalize this focus on adjustments by incumbent firms with ongoing operations, firm–prefecture–year observations were excluded if a company had no sales offices in a given prefecture in year t or no sales offices in that same prefecture in year $t + 1$. The latter condition includes instances of complete withdrawal from the prefecture.

Given these criteria, the final analytical sample comprises firms that maintained at least one sales office in a specific prefecture in both year t and the subsequent year $t + 1$. This sample consisted of 4223 firm–prefecture–year observations, representing 16 life insurance companies across Japan’s 47 prefectures from 2007 to 2018.

3.2. Variables

The dependent variable in this study was *market retrenchment*, measured as the decrease in the number of sales offices (a positive integer) operated by the focal life insurance company within each focal prefecture from year t to year $t + 1$.

The independent variables were *market attractiveness*, *market share gain*, and *market share loss*. Following Barreto (2012), *market attractiveness* was calculated based on the ratio of demand to supply in each prefecture. For the demand side, the number of households (in thousands) was used. The number of households is a more appropriate measure than population when assessing the demand for life insurance across prefectures. Life insurance policies are typically purchased at the household level, primarily by breadwinners who seek to provide financial protection for their dependents. Furthermore, households better represent the decision-making unit for financial products such as life insurance. In contrast to population figures, which include children and other individuals who generally do not make purchasing decisions, household counts more accurately reflect the number and characteristics of potential life insurance customers. For the supply side, the number of sales offices operated by all competing life insurance companies (i.e., all life insurance companies excluding the focal firm) was used. This market attractiveness variable was then standardized to facilitate the interpretation of the analysis results.

To construct the two independent variables related to market share, the market share (%) of the focal life insurance company in each prefecture was first calculated by dividing the number of insurance contracts of the focal life insurance company by the total number of insurance contracts held by all life insurance companies in that prefecture and then multiplying the result by 100. *Market share gain* and *loss* were derived from a spline function of the change in market share from year $t - 1$ to year t . These can be represented by the following equations (Marsh & Cormier, 2001):

$$\begin{aligned} \text{Market Share Loss}_t & \\ &= \text{Market Share}_t - \text{Market Share}_{t-1} \text{ if } \text{Market Share}_t - \text{Market Share}_{t-1} < 0 \\ &= 0 \text{ if } \text{Market Share}_t - \text{Market Share}_{t-1} \geq 0 \end{aligned}$$

$$\begin{aligned} \text{Market Share Gain}_t & \\ &= \text{Market Share}_t - \text{Market Share}_{t-1} \text{ if } \text{Market Share}_t - \text{Market Share}_{t-1} > 0 \\ &= 0 \text{ if } \text{Market Share}_t - \text{Market Share}_{t-1} \leq 0 \end{aligned}$$

In this implementation, the variable *market share loss* takes a negative value when a market share decrease occurs (e.g., a one-unit loss is represented as -1) and zero otherwise, whereas *market share gain* takes a positive value when a market share increase occurs and zero otherwise. This sign convention ensured that the coefficients could be interpreted consistently with the direction of change.

This spline function approach allowed for separate examination of the effects of positive changes (gains) and negative changes (losses) in market share. Using the previous year’s performance as a reference point is consistent with the operationalization of the historical aspiration level within the behavioral theory of the firm. While many studies in this area have adopted an exponentially weighted moving average of past performance, some research has used the previous year’s performance as a simpler variable for the historical aspiration level (e.g., Audia & Brion, 2007; Iyer & Miller, 2008). For reasons of parsimony

and in line with this latter approach, this study adopted the previous year's market share as the reference point to explore how boundedly rational managers perceive gains and losses in market share.

The behavioral theory of the firm also identifies another key benchmark: the social aspiration level, which is typically the average performance of competing firms. A robustness check was conducted using the deviation from the average market share of competitors as an alternative reference point; however, the results were not significant. This finding suggests that when making market retrenchment decisions, managers in the context of this study focused more on their own firm's performance than on their relative standing against competitors.

Several control variables at the firm–prefecture level were included to control for the competitive environment of the local market. *Market households* represented the number of households (in thousands) in the focal prefecture. *Market competition density* was the number of sales offices maintained by competing life insurance companies in a prefecture. *Own local density* was the number of focal life insurance company sales offices in the focal prefecture. *Prefecture size* was measured as the land area of the prefecture (in square kilometers) divided by 100,000.

To control for individual firm characteristics, several firm-level variables were also incorporated. *ROA* was calculated as the current year's surplus divided by total assets. *Firm slack* was measured as the average of three standardized slack variables: *absorbed slack*, *unabsorbed slack*, and *potential slack* (Greve, 2003a). *Absorbed slack* was the ratio of operating expenses to premium income. *Unabsorbed slack* was the ratio of cash, deposits, and call loans to total liabilities. *Potential slack* was the ratio of debt to equity. *Firm size* was the natural logarithm of total premium income, which is an appropriate measure of firm size for insurance companies (Greve, 2008). *Geographic diversification* was measured as one minus the Herfindahl–Hirschman Index (HHI). The HHI is a common measure of market concentration calculated by squaring the market share of each firm operating in a market and then summing the resulting numbers. A higher HHI indicates greater market concentration; consequently, a lower value for the geographic diversification measure indicated less diversification.

The initial strategy for managing time-specific effects was to incorporate a full set of year dummy variables. However, this approach resulted in Stata (version 17) not reporting the Wald chi-squared statistic for overall model significance. This is a common issue when the estimated parameters are numerous relative to the data clusters and is a documented concern with clustered standard errors (Cameron & Miller, 2015). In this study, employing numerous year dummies with the chosen panel data model and 16 firm clusters substantially increased the parameter count. This compromised the reliability of the asymptotic Wald test, which is a known issue for statistical methods that account for within-cluster data correlation (Liang & Zeger, 1986; Hardin & Hilbe, 2002).

This high parameter count, which led to the unreported Wald chi-squared statistic, prompted a more parsimonious approach to modeling temporal trends. Consequently, the individual year dummies were replaced with a continuous *industry clock* variable (a linear time trend variable) constructed by subtracting the base year 2007 from the year variable. This reduced the model parameters while controlling for secular time trends. Dowell and Killaly (2009), who analyzed similar firm–market–year observations, also used an industry clock.

Similarly, including firm-specific dummies to control for unobserved time-invariant firm heterogeneity also led to the nonreporting of the Wald chi-squared statistic, likely because these additional dummies substantially increased the number of parameters relative to clusters. Consequently, firm-specific dummies were excluded from the final model. The model used standard errors clustered by firm to address potential within-firm error correlation and

heteroskedasticity (Liang & Zeger, 1986). However, excluding firm-specific dummies means that estimated coefficients may suffer omitted variable bias if unobserved time-invariant firm characteristics correlate with the included explanatory variables (Wooldridge, 2010). This limitation warrants consideration when interpreting the results.

3.3. Model

To address potential multicollinearity within the dataset, the variance inflation factors (VIFs) were calculated using ordinary least squares (OLS) models, consistently with Barreto (2012). The analysis identified *market households* and *market competition density* as a pair of control variables for which the VIFs (36.93 and 29.85, respectively) significantly surpassed the commonly accepted benchmark of 10 (Kennedy, 2008). Therefore, an orthogonalization technique was applied to this pair. This set of variables exhibited strong intercorrelation, which introduced multicollinearity issues. Specifically, a modified Gram–Schmidt procedure was employed using the `orthog` command in Stata. After this procedure, the dataset was reevaluated for multicollinearity. Subsequent VIF calculations confirmed that all variable VIFs in the model were then reduced to acceptable levels, with the maximum VIF being 5.14.

The dependent variable in this study was a count variable. While the Poisson distribution is a common starting point for modeling count data, it assumes that the mean and variance of the distribution are equal (equidispersion) (Cameron & Trivedi, 2013). However, count data in practice often exhibit overdispersion (variance greater than the mean) or underdispersion (variance less than the mean). In the analysis, the Stata output for the generalized estimating equation (GEE) model indicated that the dispersion parameter, estimated at 0.915, was slightly below unity, suggesting mild underdispersion and a violation of the equidispersion assumption of the Poisson model. Although the negative binomial distribution is often introduced to address overdispersion, it also offers greater flexibility in variance modeling and is widely adopted in organizational research employing count data (Hilbe, 2011). Following methodological precedent in the literature, including Barreto (2012), the negative binomial distribution specification was employed within the GEE framework to provide robust estimation. An additional analysis using a Poisson specification yielded substantively similar results, confirming the robustness of the findings.

This research used panel data on insurance company market retrenchment across multiple prefectures and employed negative binomial regressions with GEEs (Hubbard et al., 2010). While various control variables were incorporated, it was crucial to address potential remaining within-firm correlations across prefectures. GEEs are well-suited for this because they allow for an estimated, rather than assumed, error-term correlation matrix, unlike models that assume an identity matrix typical of independent observations (Liang & Zeger, 1986); this approach also helps in considering spatial dependence. Following previous studies (Barreto, 2012; Rhee & Haunschild, 2006), negative binomial regressions with GEEs were conducted, specifying an exchangeable correlation matrix (Ballinger, 2004). This approach managed any remaining nonindependence of errors across markets for the same insurance company, reflecting the potential correlation of observations for the same insurance company within a given year. Furthermore, the Huber–White robust variance estimator ensured valid standard errors even if the specified correlation structure did not perfectly capture actual within-group correlations (Huber, 1967; White, 1980).

In the analysis of panel data using GEEs via Stata’s `xtgee` command with the options `family(nbinomial)`, `link(log)`, and `i(firm)`, an exchangeable working correlation structure specified by `corr(exchangeable)` was initially considered. This choice was based on the theoretical expectation that observations within the same firm over time were likely to exhibit some degree of consistent, nonzero correlation. However, the model that employed

the corr(exchangeable) structure failed to converge. To address this issue, a simplified working correlation structure specified as corr(independent) was adopted, assuming no correlation between observations within the same firm after accounting for covariates. This specification allowed the model to converge.

The vce(robust) option was employed to obtain the robust standard errors based on the Huber–White sandwich estimator (Huber, 1967; White, 1980). The use of robust standard errors in GEEs provides valid inferences for the estimated coefficients and their standard errors even if the chosen working correlation structure is misspecified, provided that the mean model itself is correctly specified. Therefore, although the corr(independent) structure assumed no within-firm correlation, the inferences were robust to potential deviations from this assumption. Although the vce(robust) option ensures the consistency of the parameter estimates and the validity of the standard errors, the choice of a working correlation structure can affect the estimation efficiency. If the true underlying correlation structure were indeed closer to corr(exchangeable), using corr(independent) might result in less efficient estimates (that is, larger standard errors) compared with what could have been achieved with a correctly specified and converged corr(exchangeable) model. Nevertheless, achieving model convergence is a prerequisite for obtaining interpretable results, and the corr(independent) structure, in conjunction with robust standard errors, provided a valid and practical approach in this instance.

4. Results

Table 2 presents the descriptive statistics and Pearson's correlations for all variables ($N = 4223$). The average *market retrenchment* was 0.763, with a standard deviation (SD) of 2.065, indicating varied retrenchment activity. *Market retrenchment* showed significant correlations ($p < 0.05$, $|r| > 0.03$). It was positively correlated with *market households* ($r = 0.412$), *own local density* ($r = 0.617$), and *market attractiveness* ($r = 0.083$). Conversely, it was negatively correlated with *market share loss* ($r = -0.073$), *market competition density* ($r = -0.219$), and *industry clock* ($r = -0.109$). The correlation with *market share gain* ($r = -0.028$) was not statistically significant.

Table 3 presents the results of the negative binomial regression models with GEEs used to predict *market retrenchment*. Model 1 included only control variables (Wald chi-squared = 3337.23). Model 2 introduced only *market attractiveness* as an independent variable, showing a statistically significant improvement in model fit (Wald chi-squared = 3687.22; the change in Wald chi-squared, Δ Wald chi-squared = 350.00, for Δ df = 1, was significant, $p < 0.01$) compared with Model 1. Model 3 added only the two independent variables from the spline function related to *market share change* (*market share loss* and *gain*) to Model 1, also demonstrating a statistically significant improvement in fit (Wald chi-squared = 5318.94; Δ Wald chi-squared = 1981.72, for Δ df = 2, was significant, $p < 0.01$). Model 4 included *market attractiveness* and *share change* variables. This model showed a statistically significant improvement in fit over Model 2 (to which market share change variables were added: Δ Wald chi-squared = 2300.67, for Δ df = 2, was significant, $p < 0.01$) and over Model 3 (to which *market attractiveness* was added: Δ Wald chi-squared = 668.95, for Δ df = 1, was significant, $p < 0.01$), with a Wald chi-squared of 5987.89. Finally, Model 5, the full model, included the interaction terms between *market share change* and *market attractiveness*. The addition of these interaction terms resulted in a statistically significant improvement in model fit compared with Model 4 (Wald chi-squared = 92,977.05; a joint Wald chi-squared test of the interaction terms, Wald chi-squared(2) = 19.41, $p < 0.01$, confirmed this improvement). The Wald chi-squared statistics were significant for all models ($p < 0.01$), indicating good overall model fit and progressive improvement as key variables and interactions were added (Jaccard & Turrisi, 2003).

Table 2. Descriptive statistics and correlations.

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. <i>Market retrenchment</i>	0.763	2.065												
2. <i>Market attractiveness</i>	5.242	1.227	0.083											
3. <i>Market share loss</i>	−0.366	0.649	−0.073	0.026										
4. <i>Market share gain</i>	0.253	0.958	−0.028	0.083	0.149									
5. <i>Market households</i> ^a	0.008	1.004	0.412	0.399	0.029	0.002								
6. <i>Market competition density</i> ^a	−0.490	0.628	−0.219	−0.770	−0.024	−0.046	−0.727							
7. <i>Own local density</i>	19.11	23.045	0.617	0.334	−0.157	0.070	0.722	−0.564						
8. <i>Prefecture size</i>	0.008	0.011	0.069	−0.001	0.003	−0.019	0.115	−0.017	0.134					
9. <i>Return on assets</i>	0.003	0.008	0.017	0.115	0.042	0.038	0.002	−0.068	0.100	0.001				
10. <i>Firm slack</i>	−0.053	0.128	0.084	0.029	−0.135	0.098	0.012	−0.021	0.176	0.005	−0.018			
11. <i>Firm size</i> ^b	14.02	0.979	0.153	0.261	−0.280	0.189	−0.006	−0.148	0.412	0.001	0.228	0.464		
12. <i>Geographic diversification</i>	0.957	0.023	0.011	0.016	−0.063	−0.005	−0.116	0.021	0.086	0.003	0.023	−0.132	0.124	
13. <i>Industry clock</i>	4.823	3.444	−0.109	0.443	0.165	0.056	−0.034	−0.285	−0.019	−0.001	0.133	−0.089	0.099	−0.030

Number of observations = 4223. Correlations with $|r| \geq 0.03$ were significant at $p < 0.05$ (two-tailed). ^a Orthogonalized variable; ^b log-transformed variable.

Table 3. Results of the negative binomial regression with GEEs for market retrenchment.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Market households	0.074 (0.069)	0.097 (0.060)	0.071 (0.066)	0.094 (0.058)	0.090 (0.055)
Market competition density	−0.060 (0.065)	0.087 (0.070)	−0.054 (0.064)	0.093 (0.074)	0.120 (0.077)
Own local density	0.026 ** (0.002)	0.026 ** (0.002)	0.027 ** (0.002)	0.027 ** (0.002)	0.027 ** (0.002)
Prefecture size	7.409 ** (1.950)	7.310 ** (1.945)	7.100 ** (1.962)	7.001 ** (1.955)	6.917 ** (1.952)
Return on assets	−9.688 † (5.829)	−9.788 † (5.862)	−10.258 † (5.708)	−10.337 † (5.742)	−10.484 † (5.769)
Firm slack	−0.326 (0.950)	−0.283 (0.940)	−0.314 (0.973)	−0.271 (0.929)	−0.276 (0.932)
Firm size	0.134 (0.157)	0.116 (0.155)	0.167 (0.155)	0.148 (0.154)	0.140 (0.152)
Geographic diversification	−3.235 * (1.499)	−3.122 * (1.483)	−3.376 * (1.475)	−3.264 * (1.462)	−3.360 * (1.445)
Industry clock	−0.073 * (0.033)	−0.078 * (0.033)	−0.071 * (0.034)	−0.075 * (0.033)	−0.076 * (0.033)
Market attractiveness		0.124 * (0.054)		0.123 * (0.056)	0.216 ** (0.069)
Market share loss			0.064 (0.045)	0.059 (0.045)	−0.038 (0.066)
Market share gain			−0.204 ** (0.056)	−0.202 ** (0.057)	−0.073 (0.050)
Market share loss × Market attractiveness					0.135 ** (0.044)
Market share gain × Market attractiveness					−0.115 ** (0.029)
Wald chi-squared	3337.23	3687.22	5318.94	5987.89	92,977.05
df (for Wald chi-squared)	9	10	11	12	14
p-value	p < 0.01	p < 0.01	p < 0.01	p < 0.01	p < 0.01
Number of observations	4223	4223	4223	4223	4223
Number of groups	16	16	16	16	16

† $p < 0.1$, * $p < 0.05$, ** $p < 0.01$; standard errors are in parentheses.

Hypothesis 1 predicted that higher *market attractiveness* was associated with lower *market retrenchment*. This hypothesis was tested using Models 2 and 4. In Model 2, the coefficient for *market attractiveness* is positive and statistically significant ($\beta = 0.124$, $p < 0.05$). Similarly, in Model 4, the coefficient for *market attractiveness* remained positive and statistically significant ($\beta = 0.123$, $p < 0.05$). This positive main effect suggests a counterintuitive relationship where higher attractiveness was associated with greater retrenchment. However, this finding must be interpreted with caution, as subsequent analysis revealed that this effect was highly dependent on performance feedback. The interaction with market share changes, detailed in the tests of Hypotheses 4 and 5, fundamentally altered this relationship. Therefore, Hypothesis 1 was not supported.

Hypothesis 2 proposed that when *market attractiveness* is at an average level, a previous-year loss in market share leads to no change in *market retrenchment*. This hypothesis concerns the effect of *market share loss* when *market attractiveness* is at its mean. In Model 4, the coefficient for *market share loss* was 0.059 and was not statistically significant ($p > 0.10$). For confirmation, Model 3, which did not include *market attractiveness*, also showed a non-significant coefficient for *market share loss* ($\beta = 0.064$, $p > 0.10$). In Model 5, which included the interaction term, the main effect of *market share loss* (-0.038 , $p > 0.10$) specifically represented this effect at average *market attractiveness* (where the standardized *market attractiveness* variable was 0). Although a nonsignificant result does not formally prove the null

hypothesis, it is consistent with the prediction of no change. Accordingly, the result was consistent with Hypothesis 2 within the scope of this sample.

Hypothesis 3 posited that when *market attractiveness* is at an average level, a previous-year gain in market share decreases *market retrenchment*. This hypothesis concerns the effect of *market share gain* when *market attractiveness* is at its mean. Model 4, which included *market attractiveness* as a control, showed that the coefficient for *market share gain* was -0.202 and statistically significant ($p < 0.01$). Model 3, which did not include *market attractiveness*, also showed a significant negative coefficient for *market share gain* ($\beta = -0.204$, $p < 0.01$). However, in Model 5, which included the interaction term, the main effect of *market share gain* (-0.073 , $p > 0.10$) represented this effect at average *market attractiveness* (where the standardized *market attractiveness* variable is 0), and this specific coefficient was not significant. Although Models 3 and 4 (which do not account for interaction effects) suggested a significant negative relationship, the findings from Model 5, which was more comprehensive in accounting for interaction effects, did not provide clear support for a direct negative effect of *market share gain* on average *market attractiveness*. Therefore, it was concluded that Hypothesis 3 was not supported.

Hypothesis 4 concerns the moderating effect of *market attractiveness* on the relationship between *market share loss* and *market retrenchment*. It was predicted that when *market attractiveness* is high, a loss in market share decreases *market retrenchment*, and when it is low, a loss in market share increases *market retrenchment*. This hypothesis was tested using Model 5. The interaction term *market share loss* \times *market attractiveness* in Model 5 was positive and significant ($\beta = 0.135$, $p < 0.01$). To interpret this interaction, for high *market attractiveness* (e.g., +1 SD), the effect of a one-unit market share loss (represented by a value of -1 for the *market share loss* variable) on *market retrenchment* was calculated as $(-0.038 \times -1) + (0.135 \times -1 \times 1) = 0.038 + (-0.135) = -0.097$. This negative effect indicated that in highly attractive markets, loss of market share decreased *market retrenchment*, supporting the first part of Hypothesis 4. Conversely, for low *market attractiveness* (e.g., -1 SD), the effect of a one-unit market share loss on *market retrenchment* was $(-0.038 \times -1) + (0.135 \times -1 \times -1) = 0.038 + 0.135 = 0.173$. This positive effect indicated that in markets with low *market attractiveness*, loss of market share led to an increase in *market retrenchment*, supporting the second part of Hypothesis 4. Collectively, these findings supported Hypothesis 4. The collective significance of these interaction terms, confirmed by the joint Wald test noted earlier when discussing Model 5, lent overall support to the hypothesized moderating role of *market attractiveness*.

Hypothesis 5 addresses the moderating effect of *market attractiveness* on the relationship between *market share gain* and *market retrenchment*. It was predicted that when *market attractiveness* is high, a gain in market share decreases *market retrenchment*, and when it is low, a gain in market share increases *market retrenchment*. This hypothesis was tested using Model 5. The interaction term *market share gain* \times *market attractiveness* in Model 5 was negative and significant ($\beta = -0.115$, $p < 0.01$). As an example, for high *market attractiveness* (e.g., +1 SD), the effect of a one-unit market share gain (represented by a value of +1 for the *market share gain* variable) on *market retrenchment* was $(-0.073 \times 1) + (-0.115 \times 1 \times 1) = -0.073 - 0.115 = -0.188$. This negative effect indicated that in highly attractive markets, a *market share gain* decreased *market retrenchment*, supporting the first part of Hypothesis 5. Conversely, for low *market attractiveness* (e.g., -1 SD), the effect of a one-unit market share gain on *market retrenchment* was $(-0.073 \times 1) + (-0.115 \times 1 \times -1) = -0.073 + 0.115 = 0.042$. This positive effect indicated that in markets with low *market attractiveness*, a *market share gain* led to an increase in *market retrenchment*, supporting the second part of Hypothesis 5. Thus, Hypothesis 5 was supported. As mentioned under Hypothesis 4, the joint Wald

chi-square test of the interaction terms further supported the overall significance of these moderating effects.

Figure 1 visually represents the interactive effects of market share change and attractiveness on market retrenchment, as detailed in the results for Hypotheses 4 and 5. The main pattern is clear: in highly attractive markets, both market share losses and gains were associated with decreased retrenchment, whereas in low-attractiveness markets, both losses and gains were associated with increased retrenchment. The three-dimensional plot illustrates how the predicted values of market retrenchment (vertical axis) were shaped by the interplay of the two horizontal axes: market share change and market attractiveness. The “market share change” axis distinguishes between market share losses (negative values) and gains (positive values) and spans approximately ± 2 SD. The “market attractiveness” axis indicates deviations from the mean in SD units, with higher values representing more favorable demand–supply ratios.

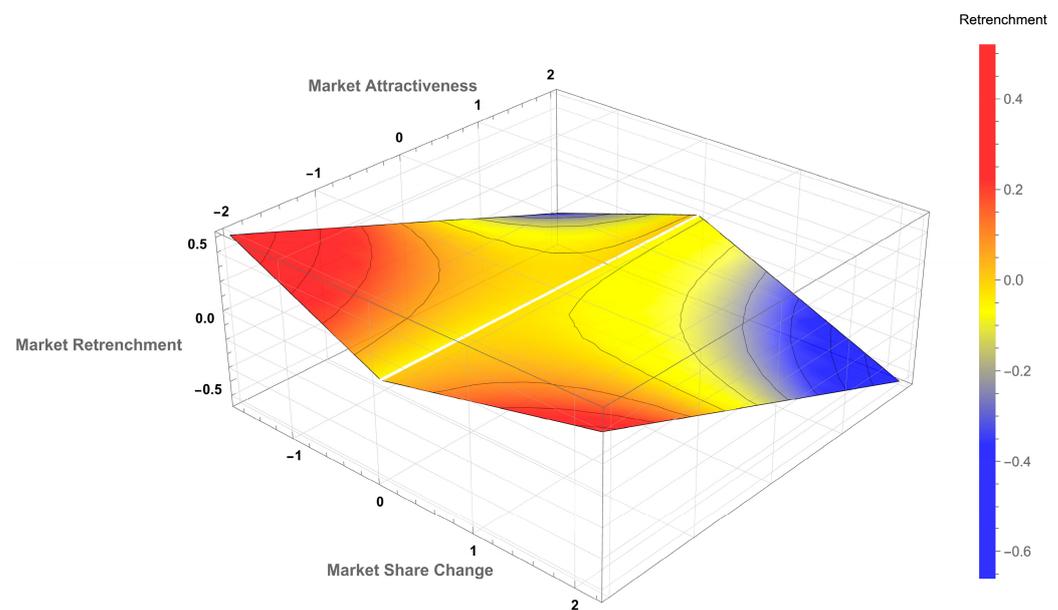


Figure 1. Interactive effects of market share changes and attractiveness on market retrenchment.

In practical terms, at high market attractiveness levels (e.g., +2 SD), moving away from zero change in market share in either direction led to a decline in predicted retrenchment, as shown by the downward slope of the surface. By contrast, at low market attractiveness levels (e.g., -2 SD), moving away from zero change in either direction led to an increase in predicted retrenchment, as shown by the upward slope. At average attractiveness (0 SD), the relationship was nearly flat, consistently with the statistical finding that neither losses nor gains significantly affected retrenchment under these conditions.

Finally, when the change in market share was near zero, the plot surface appeared almost flat, with a slight downward tilt from low to high market attractiveness. This visual pattern suggests a marginal decrease in predicted retrenchment as attractiveness increased. However, the statistical model indicated a small positive coefficient for market attractiveness under minimal performance change ($\beta = 0.216$, $p < 0.01$), meaning that the true slope was slightly upward despite its nearly flat and marginally downward visual appearance.

5. Discussion

5.1. Theoretical Contributions and Implications

This study contributes to the behavioral theory of the firm by conceptualizing market retrenchment as a decision process in which managers integrate two distinct infor-

mational cues: backward-looking feedback on past performance and forward-looking assessments of future opportunity. While the behavioral theory of the firm has traditionally emphasized problem-driven search triggered by historical performance shortfalls, the study incorporates a complementary, opportunity-driven perspective wherein cognitive representations of future potential guide strategic action. Whereas Barreto (2012) applied this forward-looking perspective to explain market expansion, this study extends the same logic to the context of market retrenchment. The findings empirically demonstrated that retrenchment decisions are not driven by performance or attractiveness independently but by their interplay, providing a more comprehensive understanding of strategic decision-making in declining industries.

Second, this study advances behavioral theory by demonstrating how market attractiveness functions as a cognitive frame. Drawing on the classic SWOT framework, this research moves beyond treating attractiveness merely as a moderator to illuminate an underlying mechanism: the external context (opportunity or threat) provided by market attractiveness alters the strategic interpretation of an internal strength (a share gain) or weakness (a share loss). The findings demonstrated, for example, that when a firm confronts a weakness (a share loss) within an opportunity (high market attractiveness), it does not interpret this as a signal to retrench. Rather, the promising external context frames the internal weakness as a solvable problem, encouraging increased commitment and thereby decreasing retrenchment. Conversely, in a threat context of low market attractiveness, any significant performance feedback—positive or negative—accelerates retrenchment. A weakness is interpreted as a confirmatory signal for retrenchment, while a strength is viewed as a strategic opening to ‘harvest and exit’ profitably. This demonstrates how the external context (opportunity/threat) fundamentally alters the strategic response to internal feedback (strength/weakness). SWOT is widely adopted for its simplicity, yet a naive, list-based use is inadequate and risks strategic errors; the TOWS formulation addresses these limitations by systematically matching internal strength/weakness with external opportunity/threat to derive actionable strategic options (Wehrich, 1982; Pickton & Wright, 1998).

Finally, by focusing on a specific action goal—performance within a regional market—the paper offers a more granular application of the principles of the behavioral theory of the firm. In doing so, it complements recent work that has expanded the theory’s application to nonfinancial metrics, such as environmental performance driving reshoring decisions (Zhang et al., 2023), and to other forms of strategic reduction, like scaling back ESG disclosures (Seow, 2025). Much of the prior literature has tested the behavioral theory of the firm using broad, firm-level goals. This study, however, demonstrates that the core mechanisms of performance feedback operate at a more operational, market-specific level. This helps explain the seemingly contradictory behavior of a single firm simultaneously pursuing different strategies in different markets, highlighting that organizational action is a localized response to specific performance–context combinations rather than a monolithic reaction to overall corporate performance.

5.2. Practical Implications

The findings of this study suggest a more structured and analytical approach to decision-making, particularly regarding resource allocation across multiple regions. This framework allows managers to use the interplay of market attractiveness and performance as a diagnostic tool. This enables them to move beyond intuitive responses and ask more disciplined, strategic questions. Specifically, the approach involves plotting each regional market based on its attractiveness and performance to formulate critical questions that guide a systematic assessment of the firm’s portfolio.

For example, in a market representing an opportunity (high attractiveness) but also a weakness (market share loss), a common bias is to escalate commitment to avoid acknowledging a potential failure. A more systematic approach would be to ask, have we thoroughly analyzed the root causes of this share loss? Is it a correctable operational issue (e.g., sales coverage, local marketing) or a more fundamental misalignment between our offerings and market needs? This line of questioning shifts the focus from defending past decisions to a forward-looking analysis of recovery potential.

Conversely, in a market representing a threat (low attractiveness) where a strength (market share gain) has been achieved, the intuitive response might be a reflexive “harvest and exit” strategy. A more strategic question would be, have we analyzed why we are gaining share while others may be struggling? Does this signal an opportunity to serve a profitable niche at a low cost as competitors withdraw? Answering these questions requires a data-driven assessment of the emerging competitive landscape.

This analytical discipline applies to all scenarios. In a market combining an opportunity (high attractiveness) with a strength (market share gain), a key risk is complacency or “satisficing.” The strategic question becomes, beyond celebrating success, have we analyzed the source of our advantage and considered how to best leverage this success? Options include reinvesting to solidify our lead, attempting to replicate the advantage in other markets, or reallocating the generated resources to another strategic priority.

In a situation combining a threat (low attractiveness) and a weakness (market share loss), the bias might be a hasty exit. A more disciplined process would ask a series of questions. First, could the withdrawal of competitors transform this into an attractive market with potential for survivor gains? Second, if an exit is still the best course of action, have we developed an orderly withdrawal plan that is explicitly linked to the reallocation of freed-up resources to a specific, higher-value opportunity elsewhere? By systematically asking these action-oriented questions, managers can better navigate behavioral traps and optimize resource allocation for the entire firm.

5.3. Limitations and Future Research

The findings of this study are subject to certain limitations, which in turn suggest avenues for future research. First, the analysis relied on data from a single industry in a single country: Japanese life insurance companies. Although this context provided a clear empirical setting for observing market retrenchment driven by historical and demographic shifts, it limits the generalizability of the findings. The institutional, regulatory, and cultural factors specific to Japan likely influence how firms interpret market signals and formulate strategic responses. For instance, strong norms promoting employment stability and a long-term orientation, which are characteristic of Japanese corporate governance, may encourage firms to persist in attractive markets even when facing performance losses.

Although the specific parameters and thresholds for such decisions are likely context-dependent, the underlying theoretical mechanism proposed in this study appears to be more universal. The core finding—that managers use forward-looking assessments of market attractiveness as a cognitive frame to interpret backward-looking performance feedback—represents a fundamental process. This process aligns with the propositions of the behavioral theory of the firm, specifically regarding bounded rationality and managerial attention. This theory posits that managers in any context rely on such simplifying frameworks to make complex decisions; however, the specific cues they prioritize and the weight they assign to them may differ across contexts.

Therefore, an important avenue for future research is to test the robustness of the proposed model across different contexts. Replicating this study in different industries (e.g., retail banking, manufacturing) or in other national contexts with different corporate gover-

nance logics (e.g., shareholder-centric economies in North America or Europe) would offer valuable insights. Such comparative research could disentangle the universal behavioral mechanisms of retrenchment decisions from their context-specific manifestations, thereby enhancing the broader generalizability of the proposed framework.

Second, the analytical model in this study did not include firm fixed effects due to statistical estimation challenges. Consequently, the possibility that the results were biased by unobserved, time-invariant firm heterogeneity cannot be fully ruled out, as acknowledged in the methods section. This represents an important limitation of the study. Future research should seek to overcome this by employing alternative estimation methods that can robustly account for such firm-specific effects.

Third, a limitation stems from the counterintuitive main effect observed for market attractiveness. Although the interaction analysis clarified that this direct positive effect on market retrenchment was conditional and largely superseded by performance feedback, the underlying reason for this main effect remains a puzzle. The finding that, in the absence of significant performance change, firms may engage in slightly more retrenchment in more attractive markets contradicts established logic. The scope of the data used in this study did not permit a definitive explanation for why this underlying direct effect was positive, suggesting its influence is more complex than theorized. Therefore, this unresolved issue represents a critical avenue for future research. Future inquiry is needed to verify whether this finding holds in other contexts—such as different industries or countries—and to re-evaluate the relationship with different measures of market attractiveness.

6. Conclusions

This study extends the behavioral theory of the firm by conceptualizing market retrenchment as a decision process that integrates two distinct signals through a SWOT-based logic: backward-looking performance feedback (framed as internal strength or weakness) and forward-looking assessments of market opportunity (framed as external opportunity or threat). The findings demonstrate that market attractiveness functions as more than a simple moderator; it acts as a cognitive frame that determines whether performance signals are interpreted as problems to be solved or as confirmations to retrench. Theoretically, this framework reveals how the strategic meaning of an internal strength or weakness is contingent on the external context of an opportunity or threat. Practically, it provides managers with a diagnostic framework to systematically map their market portfolios, challenge behavioral biases, and improve resource allocation decisions.

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Conflicts of Interest: The author declares no conflict of interest.

Abbreviations

The following abbreviations are used in this manuscript:

ESG	Environmental, Social, and Governance
GEE	Generalized estimating equation
HHI	Herfindahl–Hirschman Index
OLS	Ordinary least squares
ROA	Return on assets
SD	Standard deviation
SWOT	Strength, weakness, opportunity, threat
VIF	Variance inflation factor

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