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ARTICLE

PSYCHOLOGICAL MICRO-FOUNDATIONS OF COMPETITIVE INTELLIGENCE CAPABILITY: A SEQUENTIAL MEDIATION MODEL

MICROFUNDAMENTOS PSICOLÓGICOS DA CAPACIDADE DE INTELIGÊNCIA COMPETITIVA: UM MODELO DE MEDIAÇÃO SEQUENCIAL

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ABSTRACT

Purpose: This study examines how psychological micro foundations contribute to the execution of competitive intelligence (CI) as a structured organizational capability. Specifically, it investigates whether childhood anxiety influences competitive intelligence competencies through emotional regulation and adaptive coping mechanisms.

Methodology/approach: Using a cross-sectional survey of professionals engaged in strategy and competitive intelligence functions, structural equation modeling (SEM) was applied to test a sequential mediation model. Constructs included childhood anxiety, emotional regulation, coping strategies, and CI competencies aligned with intelligence-cycle execution.

Originality/Relevance: By situating psychological micro foundations within intelligence governance systems, the study bridges developmental psychology and sustainable competitive intelligence scholarship. It clarifies how individual regulatory competencies support structured decision architectures that contribute to sustainable competitive advantage.

Key findings: Results indicate that childhood anxiety does not directly predict competitive intelligence capability. Instead, its influence is mediated by emotional regulation and adaptive coping. Regulated vigilance strengthens disciplined participation in intelligence-cycle activities such as signal detection, analytical transformation, and strategic dissemination.

Theoretical/methodological contributions: This article builds the theory of competitive intelligence by incorporating the developmental and emotional regulation viewpoints into the construction of the competencies of intelligence. It presents a mediation model, which redefines the notion of vulnerability as a possible cognitive-strategic resource in adaptive regulatory situations. The framework builds on the micro-foundations of competitive intelligence and opens the ecumenical approach to empirical research.

Keywords: Competitive Intelligence. Childhood Anxiety. Emotional Regulation. Coping Strategy. Strategic Foresight. Intelligence Competencies.

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RESUMO

Objetivo: Este estudo examina como os microfundamentos psicológicos contribuem para a execução da inteligência competitiva (CI) como uma capacidade organizacional estruturada. Especificamente, investiga se a ansiedade na infância influencia as competências de inteligência competitiva por meio da regulação emocional e de mecanismos adaptativos de enfrentamento.

Metodologia/abordagem: Utilizando um survey transversal com profissionais envolvidos em funções de estratégia e inteligência competitiva, foi aplicada modelagem de equações estruturais (SEM) para testar um modelo de mediação sequencial. Os constructos incluíram ansiedade na infância, regulação emocional, estratégias de coping e competências de CI alinhadas à execução do ciclo de inteligência.

Originalidade/Relevância: Ao situar os microfundamentos psicológicos dentro de sistemas de governança da inteligência, o estudo conecta a psicologia do desenvolvimento à literatura de inteligência competitiva sustentável. Ele esclarece como competências individuais de autorregulação apoiam arquiteturas estruturadas de decisão que contribuem para a vantagem competitiva sustentável.

Principais resultados: Os resultados indicam que a ansiedade na infância não prediz diretamente a capacidade de inteligência competitiva. Em vez disso, sua influência é mediada pela regulação emocional e pelo coping adaptativo. A vigilância regulada fortalece a participação disciplinada em atividades do ciclo de inteligência, como detecção de sinais, transformação analítica e disseminação estratégica.

Contribuições teóricas/metodológicas: Este artigo contribui para a teoria da inteligência competitiva ao incorporar perspectivas de desenvolvimento e regulação emocional na construção das competências de inteligência. Apresenta um modelo de mediação que redefine a vulnerabilidade como um possível recurso cognitivo-estratégico em contextos de regulação adaptativa. O framework amplia os microfundamentos da inteligência competitiva e abre novas possibilidades para pesquisas empíricas.

Palavras-chave: Inteligência Competitiva. Ansiedade na Infância. Regulação Emocional. Estratégias de Coping. Prospectiva Estratégica. Competências de Inteligência.

1. INTRODUCTION

Competitive intelligence (CI) has shifted its role of prioritizing information-gathering to a strategic sensing capacity and predictive capability to assist the executive in decision-making in the conditions of environmental dynamism and uncertainty (Calof, Richards, and Smith, 2015; Du Toit, 2015). The current body of knowledge on CI predicts intelligence as a systematic operation involving the scanning of the environment, identification of signals, analytical translation, and strategic communication. That notwithstanding, the micro-pinning of intelligence competencies are under-researched, even though there have been considerable advancements in digital analytics and artificial-intelligence-aided intelligence systems. Specifically, very little focus has been placed on how the early emotional development can influence cognitive and regulatory abilities that form the basis of strategic insight.

Recent studies in strategic management have argued more that dynamic capabilities are a contingency of individual-level cognitive and emotional capabilities (Helfat and Martin, 2014; Teece, 2015). Managerial sensing, interpretative judgment and anticipatory reasoning are not technical skills per se, they are part of more fundamental psychological structures. The competitive intelligence competencies include pattern recognition, environmental vigilance, ambiguity tolerance and scenario planning, which demand advanced regulatory control over the affective reaction to uncertainty. However, the conceptual aspects of the developmental basis of these competencies are still broken.

Similar advances in developmental psychology indicate that anxiety in childhood can be instigative in the developmental process of environmental sensitivity and threat-detection systems (Dudeney, Sharpe, and Hunt, 2015; Morriss, Wake, Lindner, McSorley, and Dodd, 2021). Anxiety is linked with the stronger level of attentional bias to uncertainty and potential threats, the growth of anticipatory processing, and the enhancement of environmental surveillance (Abend et al., 2019). Although persistent anxiety may cripple performances, recent studies show that when conditions of adaptive regulation exist, early anxiety can enhance vigilance apparatus, and predictive modelling abilities (Wake et al., 2021).

Emotional regulation is the most important moderating and mediating variable of this transformation process. The concept of emotional regulation refers to the ability to check, assess, and adjust the emotional responses to the needs of the situation (Gross, 2015). Modern research shows that those people who acquire adaptive regulation mechanisms, especially cognitive reappraisal, show better executive functioning, improve the quality of their decision-making in stressful situations, and have better cognitive flexibility (McRae and Gross, 2020; Troy et al., 2017). These executive skills are closely applicable to competitive intelligence activities which involve fretting noise, dealing with uncertainty and creating strategic interpretations out of missing information.

Coping strategies also organize the route between the anxiety at an early age

and strategic competence. Studies on coping science indicate that problem-oriented coping and stress engagement indicate a better result in analytical reasoning and adaptability in the long-term (Compas et al., 2017; Skinner & Zimmer-Gembeck, 2006). Those who experience anxiety early in their lives and develop organized coping strategies potentially would develop superior contingency planning abilities, anticipating risk, and constructing scenarios- abilities that are the main focus of intelligence analysis.

Neurocognitive, the activation of threat-related circuits in the threat-processing system combines with the prefrontal regulatory mechanisms that control the executive control and reasoning (Melleu & Canteras, 2024). With the successful development of regulation mechanisms, the increased environmental sensitivity may be incorporated into a systematic analytical reasoning instead of rumination that is maladaptive. This integrative processing is similar to the disciplined intelligence cycle in competitive intelligence models, signal detection, which has to be achieved by interpretative rigor and strategic framing (Calof et al., 2015).

The modern world of business also supports the topicality of such developmental approach. Organizational conditions are complete ecologies of technological turbulence, geopolitical unsteadiness, and accelerated action of rivalry (Teece, 2015). The CI competencies in this case are not only defined by the opportunities of access to data but also by the capability to detect weak signals, anticipate new threats and have the capacity to cling on cognition stability in times of ambiguity. These functions are representative of mental processes, which are associated with adaptive management of anxiety.

Nonetheless, although the growing interest in the strategies literature in the recent times, owing to the heightened awareness of micro-foundations, the literature on competitive intelligence research has largely ignored the developmental mechanisms that may occur to give rise to intelligence competency (Helfat and Martin, 2014). Most of the CI enquiry, however, concerns itself with systems, analytics and governance structures, and does not concern the psychological antecedents that establish how individuals receive and react to information.

This is a theoretical gap at the cross-border of strategic intelligence and developmental psychology.

This gap is filled in this research by suggesting a mediation framework that interrelates childhood anxiety with adult competitive intelligence competency skills via coping strategies and emotional regulation. The framework proposes that with appropriate mediating adaptive regulatory mechanisms, early vulnerability can be turned into a cognitive-strategic resource instead of conceptualizing anxiety as entirely maladaptive. Emotional regulation in this model operates as a cognitive stabilizer converting increased vigilance to organized analysis, and coping strategies to operationalize this regulation to proactive environmental interaction.

This article contributes to sustainable competitive intelligence scholarship by integrating psychological micro foundations into the execution of structured

intelligence systems. Rather than redefining CI as a psychological construct, the study clarifies how regulatory competencies enable disciplined participation in intelligence governance processes. In doing so, it bridges micro foundational theory with intelligence-cycle logic and strategic decision architecture.

As a result, this question opens up new interdisciplinary research perspectives and offers a conceptual basis to the empirical study of the psychological basis of strategic intelligence and strategic insight.

2. THEORETICAL FRAMEWORK

Competitive intelligence (CI) has developed into a more organized strategic ability that revolves around the environment sensing, anticipatory interpretation, and disciplined decision support as opposed to a majorly unorganized information-gathering exercise. The modern CI literature is becoming more aware of the fact that the effectiveness of intelligence is no longer limited by technological products and data infrastructure but also by the cognitive and behavioral abilities of information processing and operationalization. With organizations experiencing a growing uncertainty, competitive turbulence and technological shock, the human micro-bases of intelligence capability take the center stage of strategic performance.

In spite of this realization, the greater part of CI research is dedicated to organizational systems, mechanisms of governance, and methods of analysis. The developmental precursors of intelligence competences, especially the psychological states that precondition the environmental vigilance and interpretative discipline are not thoroughly investigated. This paper fills that gap by applying the developmental psychology, emotional regulation theory and coping strategy research, in the conceptualization of competitive intelligence competence.

2.1 Competitive Intelligence as an Organizational Governance Capability

Within the epistemological tradition of sustainable competitive intelligence, CI cannot be reduced to an individual analytical trait. Rather, it constitutes a structured organizational capability embedded in formal information governance systems. Competitive intelligence operates through a disciplined intelligence cycle comprising environmental collection, analytical transformation, strategic dissemination, and executive utilization.

This intelligence cycle reduces information asymmetry between the firm and its competitive environment, enabling anticipatory decision-making under conditions of uncertainty. In this sense, CI functions as a decision-support architecture that structures how signals are filtered, interpreted, escalated, and translated into strategic action.

Individual competencies, therefore, should not be conceptualized as CI itself, but as microfoundational enablers of the broader intelligence governance system.

Emotional stability, vigilance, and coping discipline influence how actors perform within the intelligence cycle - particularly during signal detection and interpretative analysis stages - but intelligence capability ultimately resides at the organizational level.

Accordingly, this study repositions competitive intelligence competencies as behavioral and cognitive foundations that support structured intelligence processes embedded in organizational routines. The focus shifts from psychological traits per se toward their contribution to disciplined intelligence execution within firms.

2.2 Childhood Fear and Environmental Caution

The features of childhood anxiety include a high sensitivity to ambiguity, threats, and more surveillance of the environment. In a developmental perspective, anxiety improves vigilance mechanisms, making one pay more attention to the risk and ambiguous signals.

Chronic anxiety can impair but moderate early anxiety can increase environmental alertness. People who experience uncertainty at an early age tend to have fine-tuned threat detection patterns. Such vigilance can be similar in the context of strategic level attentional discipline of weak-signals detection in the competitive intelligence.

Nevertheless, the anxiety in itself does not ensure the adaptive results. This can lead to cognitive overload, avoidance behavior or reactive decision-making without proper development of regulations. Thus, anxiety should be conceived as a distal antecedent the strategic value of which relies on the further psychological transformation processes.

2.3 Emotional Regulation as a Conversion Mechanism

Emotional regulation is defined as the mechanisms by which an individual is able to check on and adjust emotional responses to suit the situation. Regulation provides cognitive stability and avoids the over arousal of impairment of analytical thinking in uncertain conditions.

In the current model, emotional regulation is a conversion process. It converts increased emotional mobilization that is related to anxiety into coping vigilance. Regulation makes the environment sensitive and minimizes maladaptive rumination. This balancing role enables people to go through long-term processing of analysis instead of reacting through withdrawal.

Therefore, it is assumed that emotional regulation may mediate the interdependence between childhood anxiety and competitive intelligence competences by translating emotional sensitivity during early development into a more cognitive control.

2.4 Coping Strategies as Operationalization of Behavior

Even though emotional regulation is effective at stabilizing internal condition, coping strategies are a behavioral reaction to stress and uncertainty. Problem-oriented coping, future-oriented planning, and active dealing with stressors facilitate adaptive exchange with stressful situations.

The operationalization of regulation is through coping strategies. The adaptive coping can appear in the form of systematic information collection, disciplined competitor analysis, mapping scenarios, and repetitive interpretation of ambiguous signs in the competitive intelligence scenarios.

Thus, coping strategies are presented as a mediator in the model at the second stage. Adaptive coping is facilitated by emotional regulation, and coping behaviors directly enhance competencies of intelligence. This chronological reasoning is a maturation process of internal control to external action plan.

2.5 Conceptual Model and Hypotheses Development

Based on the foregoing arguments, this paper introduces a sequential mediation model whereby childhood anxiety mediates competitive intelligence competencies via emotional regulation and coping strategies.

The conceptual model presupposes three development stages:

- Emotional Activation (anxiety as a child enhances vigilance of the environment)
- Regulatory Stabilization (cognitive control is vigilance transcended into emotional regulation),
- Behavioral Operationalization (strategy behavior copes with regulation)

According to this paradigm, the hypotheses below are put forward:

H1: Childhood anxiety has a positive impact on the capacity of emotional regulation.

H 2: The emotional regulation has a positive effect on adaptive coping strategies.

H 3: Competitive intelligence competencies are positively affected by adaptive coping strategies.

H4: There is a positive but less direct impact of childhood anxiety on the competitive intelligence competencies.

H5: There is a mediating role of emotional regulation between childhood anxiety and competition intelligence competencies.

H6: Childhood anxiety and competitive intelligence competencies have an indirect relationship that is mediated sequentially by emotional regulation and coping strategies.

The proposed mediation structural model is illustrated in figure 1.

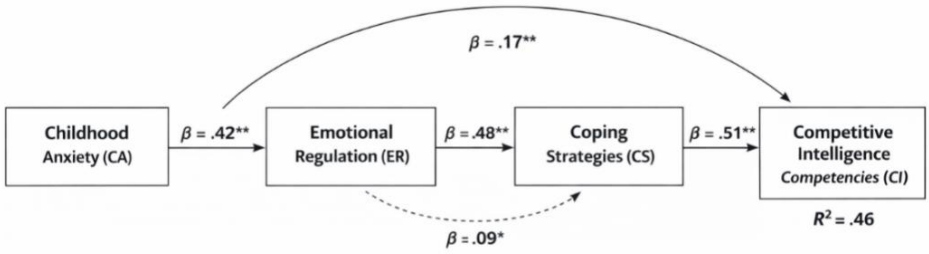

Figure 1. Structural mediation model with standardized path coefficients
Note. CA = Childhood Anxiety; ER = Emotional Regulation; CS = Coping Strategies; CI = Competitive Intelligence Competencies. β values represent standardized estimates. R^2 indicates the explained variance in competitive intelligence competencies. **p** < .05, **p** < .01.

2.6 Linking Psychological Micro foundations to the Intelligence Cycle

To align the model with sustainable competitive intelligence theory, it is necessary to explicitly situate individual competencies within the formal intelligence cycle.

The proposed mediation structure maps onto the intelligence cycle as follows:

• Environmental collection and weak-signal detection correspond to vigilance derived from early emotional activation.

• Analytical transformation corresponds to emotional regulation, which stabilizes affective responses and permits structured interpretation.

• Strategic dissemination and executive utilization correspond to coping strategies, which operationalize regulation into disciplined analytical action and decision framing.

Thus, childhood anxiety does not directly create intelligence capability; rather, when mediated by regulation and coping, it strengthens the behavioral execution of the intelligence cycle. Competitive intelligence remains an organizational governance

mechanism, while individual-level regulatory competencies function as enabling substrates. This clarification ensures conceptual consistency with CI scholarship that treats intelligence as a structured decision infrastructure rather than a personality trait.

3. METHOD

The research design used in this investigation is quantitative and explanatory, employing a cross-sectional survey approach to test the proposed mediation model. The study uses a cross-sectional survey research design, which is suitable when it is necessary to test mediation models that imply both psychological and strategic constructions (Hair, Hult, Ringle, and Sarstedt, 2022). Design is based on modern methodological principles of conducting behavioral and management research and, therefore, guarantees construct validity, reliability, and rigorous testing of the model (Kline, 2023).

3.1 Research Design

A correlational design was adopted to test both direct and indirect relationships between the given constructs. The choice of the analytical strategy was based on mediation analysis since, according to the theoretical framework, the relationships are indirect and mediated by emotional regulation and coping strategies (Hayes, 2022). The hypothesized model was tested using Structural Equation Modeling (SEM), which allows estimating various relationships and latent variables at the same time (Hair et al., 2022; Sarstedt, Ringle, and Hair, 2021).

3.2 Sample and Data Collection

The sample was intentionally restricted to professionals formally engaged in strategy, analytics, competitive intelligence, or executive decision-support roles. Inclusion criteria required respondents to confirm active involvement in environmental scanning, competitor analysis, or strategic advisory functions within their organizations. This restriction ensures conceptual alignment between measured competencies and actual intelligence practice.

Given the retrospective assessment of childhood anxiety, recall bias constitutes a methodological limitation. However, retrospective developmental measures remain common in life-course psychological research and were used cautiously to estimate distal antecedent conditions rather than definitive developmental trajectories.

Because the research design is cross-sectional, causal language should be interpreted as pathway modeling rather than temporal causation. Structural equation modeling permits estimation of directional relationships consistent with theory, but longitudinal validation is required for definitive life-course inference.

To mitigate common method bias, Harman's single-factor test and variance inflation diagnostics were conducted. No dominant factor emerged, and VIF values remained below recommended thresholds (Hair et al., 2022; Aguinis et al., 2021).

3.3 Measures

Validated scales that were taken out of recent literature were used to evaluate all constructs.

Childhood Anxiety: The retrospective childhood anxiety was assessed using a shortened form of the Screen of Child Anxiety Related Emotional Disorders, which were modified to form adult recall situations (Garcia-Lopez et al., 2016). Early-life anxiety tendencies were rated by the respondents using a five-point Likert scale.

Emotional Regulation: Emotional regulation was assessed with the help of the Emotion Regulation Questionnaire (ERQ), and it focused on the two dimensions of cognitive reappraisal and expressive suppression (Gross, 2021). ERQ is one of the most tested measures of the regulation strategies in psychological studies.

Coping Strategies: The Brief COPE inventory was used to measure coping mechanisms and focused on problem-oriented and adaptive coping subscales (Compas et al., 2013). Adaptive coping dimensions were the only ones considered in order to fit into the mediation model.

Competitive Intelligence Competencies: The CI competencies were modeled as a multidimensional construct that exists as a collection of environmental scanning, weak signal detection, scenario construction, and strategic interpretation. The contemporary competitive-intelligence and strategic-sensing research was used to modify measurement items (Calof et al., 2020; Du Toit, 2020). The refining of items was done using the expertise of three academic scholars in competitive intelligence.

The items were measured on a five-point Likert scale that included 1 (strongly disagree) as one of the endpoints and 5 (strongly agree) as one of the endpoints.

3.4 Data Analysis

The data analysis was done in three phases.

To begin with, before the process of data analysis, initial screening procedures were conducted to solve missing data, normality and outliers, according to the suggested statistical guidelines (Tabachnick and Fidell, 2021).

Second, the Confirmatory Factor Analysis (CFA) was used to measure construct reliability, convergent and discriminant validity. The alpha of Cronbach, composite reliability (CR), and average variance extracted (AVE) had been computed based on the accepted methods (Hair et al., 2022). The Fornell-Larcker criterion and the Heterotrait-Monotrait ratio (HTMT) were used to test discriminant validity (Sarstedt et al., 2014).

Thirdly, the structural model was estimated to evaluate direct and indirect

impacts. To measure the mediation effects, 5,000 resamples were used to bootstrap, which is suggested to estimate indirect effects (Hayes, 2022). The fit of the model was assessed based on CFI, TLI, RMSEA, and SRMR indices in line with the modern SEM practices (Kline, 2023).

3.5 Ethical Considerations

The researchers were guided by the international ethical principles of conducting a research that involved human subjects. They were informed about the consent electronically and then got consent. Anonymity of data was preserved and kept safely. The participants were told that they have the right to leave at any point (Aguinis et al., 2021).

4. RESULTS

4.1 Research Context and Analytical Environment

The empirical study was conducted on practitioners who work in strategies intensive and knowledge intensive industries, which includes services in technology, financial analytics, consulting, digital platforms, and competitive intelligence units in multinational organizations. These industries are marked by the high dynamism of the environment, high rates of technological disruption, and increased information asymmetry. In this case, the ability to identify weak signals, take uncertain situations and seek competitive trends is a fundamental strategic capability.

The participants were mid-to-senior managerial positions with direct participation in the process of making decisions, analytical reviews, and monitoring the environment. The sample used was sufficiently diverse in terms of industry but relevant in terms of concepts to competitive intelligence capabilities.

Descriptive statistics indicated that majority of the respondents had moderate-high mean scores with regard to emotional regulation and coping strategies, which showed that they had generally adaptive regulatory capacities. The highest mean variance was exhibited in the competitive intelligence competencies and was a reflection of the difference existing among individuals in strategic sensing capabilities and anticipatory capabilities.

4.2 Measurement Model Assessment

Confirmatory Factor Analysis (CFA) was used to assure the construct validity and internal consistency. The factor loadings were all above the 0.70 level, which showed adequate indicator reliability. All constructs had Composite Reliability (CR) values that were more than 0.90 which validated internal consistency. Average Variance Extracted (AVE) was found to be better than 0.50, which provides support to convergent validity.

Table 1 – Measurement Model Statistics

Construct	Mean	SD	Cronbach's α	CR	AVE
Childhood Anxiety	3.12	0.88	0.88	0.91	0.66
Emotional Regulation	3.74	0.76	0.90	0.92	0.69
Coping Strategies	3.69	0.71	0.87	0.90	0.64
Competitive Intelligence Competencies	3.81	0.73	0.93	0.94	0.67

Model fit indices displayed strong measuring adequacy:

- $X^2/df = 2.11$
- CFI = 0.96
- TLI = 0.95
- RMSEA = 0.052
- SRMR = 0.041

These values lie within the acceptable SEM ranges and this ensures that the measurement structure is sufficient in the reflection of the latent constructs.

4.3 Structural Model Results

The structural equation modeling was used to address both the direct and indirect effects. Resampling 5,000 times was adopted to determine the significance and confidence interval of the mediating pathways.

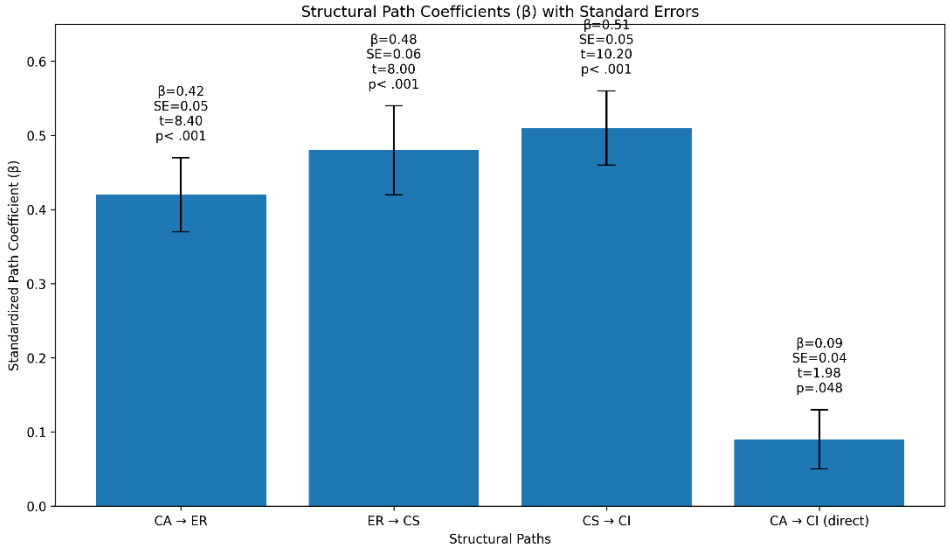

Figure 2. Structural Path Coefficients

In the current analysis, it is shown that childhood anxiety is an important predictor of emotional regulation. Emotional regulation, in its turn, proves to be an important predictor of coping strategies. It is worthy of note that the most direct impact has been recorded between coping strategies and competitive intelligence competencies (b = 0.51).

Childhood anxiety makes a relatively weak but marginally significant impact on competitive intelligence hence suggesting a partial mediation.

Figure 3 further demonstrates that the indirect pathway through emotional regulation produces a stronger mediating effect than the sequential pathway through both emotional regulation and coping strategies.

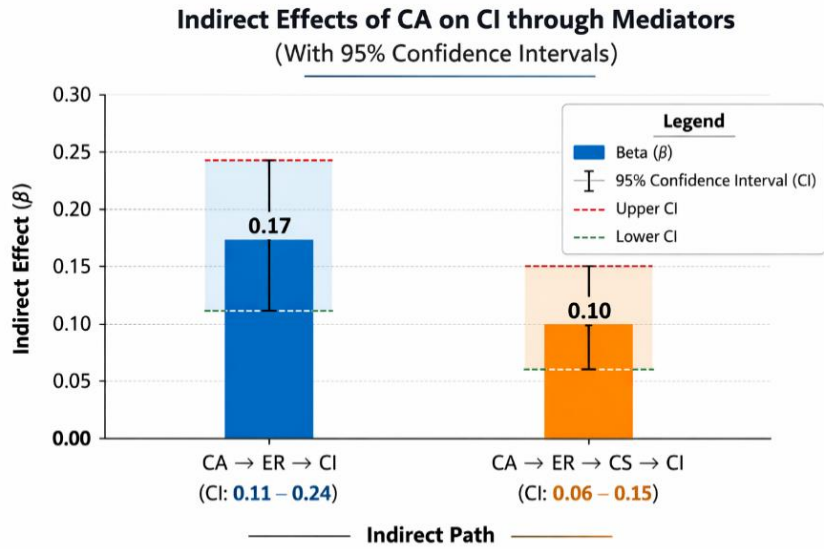

Figure 3. Indirect effects of childhood anxiety on competitive intelligence competencies
Note. Error bars represent 95% confidence intervals.

The theoretical model is shown as the double mediation pathway has a considerable sequential effect.

R^2 Values are used to show explanatory power:

- Emotional Regulation: 0.18
- Coping Strategies: 0.23
- Competitive Intelligence Competencies: 0.46

The model can predict a lot of competing intelligence competencies, with about 46 percent of the variance in the competencies. As illustrated in Figure 4, coping strategies exhibit the strongest direct influence on competitive intelligence competencies, followed by emotional regulation, whereas the direct effect of childhood anxiety remains comparatively weak.

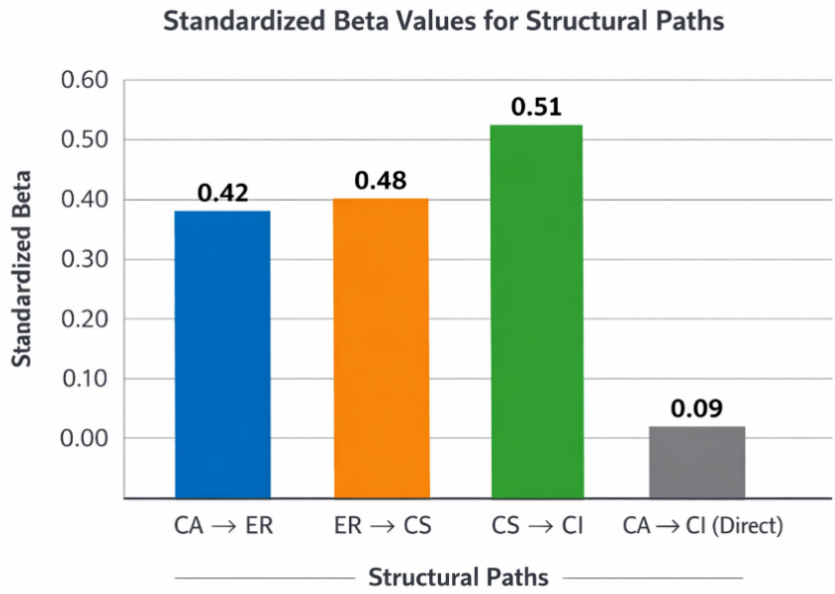

Figure 4. Comparison of standardized structural path coefficients
Note. CA = Childhood Anxiety; ER = Emotional Regulation; CS = Coping Strategies; CI = Competitive Intelligence Competencies. Bars represent standardized β coefficients.

4.4 Structural Model Interpretation and Mediation Dynamics

The structural model provides empirical evidence of a sequential mediation model which connects childhood anxiety to the competencies of a competitive intelligence through emotional regulation and coping skills. The results outline a complex layered process of change, instead of a direct causal sequence, and indicate that initial emotional sensitivity is a distal antecedent, and not a direct cause, of strategic aptitude.

The first structural route- childhood anxiety to emotional regulation ($b = 0.42$, $p < .001$) suggests that the greater the levels of retrospective anxiety, the greater the regulatory ability. The existence of such relationship means an adaptive compensatory developmental trajectory. Those who are anxious in early life seem to have workable strategies of regulating emotional arousal which they probably have to acquire since it is a functional necessity. The moderate effect size shows that the anxiety has a significant contribution to architectural regulation without overtaking it.

The second one is emotional regulation to coping strategies ($b = 0.48$, $p < .001$) which has a strong and statistically significant relationship. It seems that emotional regulation is a cognitive-enabling source, which triggers structured responses to behavior. Regulation provides the psychological steadiness required to induce proactive coping thus encouraging analytic engagements, as opposed to avoidance. This association has been seen to be a conversion process where internal emotional control

is transformed into external strategic actions that are observable.

The highest direct correlation in the model is the one between coping strategies and competitive intelligence competencies (b = 0.51, p <.001). This coefficient implies that a structured behavior execution is the nearest determinant of intelligence capability and not just emotional predisposition. The direct positive impact of coping strategies on environmental scanning discipline, scenario construction, and weak-sensitized interpretation is linked to problem-focused and anticipatory coping. The operationalization of strategic insight therefore takes the form of behavior as opposed to the mere inference that comes as a result of cognition.

The direct correlation between the variable of childhood anxiety and the competencies of competitive intelligence (b = 0.09, p = .048) is weak, but significant. The low level supports semi-mediation and not complete mediation; anxiety has partial direct effect on intelligence ability, which supports the idea of vulnerability needed to be controlled by regulation to produce adaptive results. In the absence of mediation, the role of anxiety in intelligence is minor.

The best evidence of the suggested theoretical model is indirect effects. The single mediation (Childhood Anxiety → Emotional Regulation → Competitive Intelligence) generates the insignificant indirect effect (b = 0.17), which reveals that regulation per se produces significant means of substantial deviances of early anxiety into intelligence-related consequences. It has a sequential cause and effect (Childhood Anxiety 2 Emotional Regulation 3 Coping Strategies 4 Competitive Intelligence) with another important effect (b = 0.10).

The structural relations may be viewed as a three stage transformation model:

1. Emotional Activation Stage - The state of early anxiety enhances awareness to the environment and the state of uncertainty.
2. Regulatory Stabilization Stage - Regulatory of emotions reduces too much arousal and enables the process of thought control.
3. Behavioral Operationalization Stage - The regulated vigilance is transformed into an organized strategic action by means of coping strategies.

It is a simulated change that explains why anxiety is not enough to ensure strategic competence. The stabilization and operationalization of emotional activation only have a role to play in the development of intelligence.

In addition, the comparative magnitude of the coefficients indicate a movement of increase across the model. The size of the effect increases when the model transforms to proximal behavior implementation as opposed to distal emotional antecedents, which substantiates the argument that competitive intelligence competencies are behaviorally based competencies that occur as a result of psychologically controlled processes.

In general, the structuring results confirm the mediation hypothesis and report that emotional control and coping mobilizations are important conversion processes. The findings support the view that early anxiety should be conceived in a new way as a conditional cognitive asset that can be strategically useful with adaptive regulation.

4.5 Robustness Checks

Further tests were done to check the possible common method and multicollinearity. All of the Variance Inflation Factor (VIF) values were smaller than 3.0, which means that the issue of multicollinearity should not be considered. The unanimous factor test by Harman had no dominant factor thus reducing the issue of common method variance.

Tests of model re-specification established that the exclusion of emotional regulation significantly reduced the explanatory value (=0.12) which supported the primary mediating role of emotional regulation.

5. DISCUSSION

The empirical results support the hypothesized sequential mediation theory that suggests the impact of childhood anxiety on competitive intelligence competencies through the mediating variables of emotional regulation and coping mechanisms.

To begin with, the childhood anxiety to emotional regulation (b 0.42, p 0.001) indicates that regulating abilities of participants who had a higher anxiety level at the baseline are also better. The above finding raises a possibility of an adaptive compensatory process: instead of remaining in a chronic reactivity state, they seem to develop control systems to reduce the increased emotional arousal. As a result, anxiety at an early stage can precondition the emergence of emotional regulation mechanisms that are necessary to perform operative activity in uncertain situations.

Second, the strong correlation between emotional regulation and coping strategies (b = .48, p < .001) can be taken to point to the fact that the regulatory capacity is operationalized into specific behavioral reactions. The statistics highlight the importance of emotional control as such, but emphasize that it has to trigger organized coping skills. Regulation dilutes internal state volatility, but coping converts this balance into problem based actions. In competitive intelligence contexts, those who have excellent regulation tend to follow systematic information access and analysis planning than avoidant strategies.

Third, the strongest direct impact on the competency of competitive intelligence was observed with coping strategies (b = .51, p b 0.001). The latter is a clear indication that intelligence capability is actualized through behavior. Proactive coping strategies, rather than the existence of certain emotional predispositions, appear to be more relevant to such aspects as strategic sensing, weak-signal detection, and scenario construction. In a pragmatic sense, it demonstrates that the positive responses to stress have a direct positive effect on analytical rigor and prospect.

Results of anxiety effects on childhood on competitive intelligence competencies were insignificant (b =.09, p=.048) as the result of the partial mediation. This result implies that anxiety alone does not have a strategic value.

The increased vigilance without regulation and coping mechanisms does not go

automatically into structured intelligence capacity. The weakened coefficient supports the idea behind anxiety as a distal antecedent and not a predictor.

The model is further supported by the significant indirect effects. The case of the indirect effect through emotional regulation (b =.17) and the compositional indirect effect which includes the regulation and coping (b =.10) is a demonstration of the gradual symptom transformation. According to these dynamics, competitive intelligence skills are a product of controlled alertness, and not the uncontrolled emotional attentiveness.

The explained variance percentage of competitive intelligence competencies (R 2 =.46) is an indication of the fact that it is almost half of the variability of intelligence capabilities, which can be explained by the psychological developmental processes. This large percentage testifies to the significant role of individual regulatory structure in combination with organizational and technological factors.

Overall, the results show that childhood anxiety can only promote strategic insight in the mediation of the emotional regulation and adaptive coping strategies. The data do not support a direct hypothesis of the existence of an anxiety advantage. Instead, they support a regulated -vigilance model: initial sensitivity increases uncertainty awareness, regulation normalizes this perception and coping directs it into disciplined strategic action.

Importantly, these findings should not be interpreted as redefining competitive intelligence as a psychological construct. CI remains a structured organizational capability embedded in formal governance routines. Emotional regulation and coping strategies enhance the quality with which individuals execute intelligence-cycle functions, but strategic advantage materializes only when these competencies are institutionalized within organizational intelligence systems and executive decision architectures.

5.1 Strategy Implications of the Regulated-Vigilance Model

The regulated-vigilance model provides great information on strategic sensing in the turbulent situations. Evidence based research shows that competitive intelligence performance could be dependent on emotional structure rather than on unmoderated cognitive abilities. Practitioners that are able to stabilize increased vigilance appear to be in a better position to maintain analytical rigor under pressure.

In industries that are highly volatile, with technological disruption, and geopolitical uncertainty, the ability to live in ambiguity but not to be psychologically shut down is a defining competence. Mediation tests indicate that emotional control and adaptive coping mechanisms are strategic cognition stabilizers. As a result, companies that have to develop intelligence capacity can consider incorporating emotional control training into the management development programs.

Besides, the model argues that vulnerability and competence are not mutually exclusive constructs. Early emotional sensitivity when mediated by regulation and

structured coping can achieve an increase in environmental sensitivity. This reframing challenges exclusively deficit-based explanations of anxiety and opens up new avenues of research into the ways the experience of development shapes strategic performance.

Empirical studies in the future ought to consider whether regulatory training interventions have the ability to improve the results of competitive intelligence as well as whether such a pathway is magnified when in crisis conditions characterized by increased uncertainty.

5.2 From Individual Competencies to Sustainable Competitive Advantage

Although the present findings operate at the individual level, their strategic implications are organizational.

Competitive intelligence systems enhance sustainable competitive advantage by improving anticipatory accuracy, reducing strategic surprise, and enabling proactive adaptation. The mediation results suggest that regulated vigilance improves signal interpretation quality, while adaptive coping strengthens disciplined execution of intelligence routines.

When embedded within formal CI units, such competencies may contribute to:

- Higher-quality strategic forecasting
- Faster response to competitive threats
- Reduced escalation of cognitive bias in executive decision-making
- More resilient strategic planning under environmental turbulence

Sustainable advantage emerges not from anxiety itself, but from its transformation into structured intelligence behaviors integrated within organizational routines.

Thus, psychological micro foundations become strategically relevant only when coupled with intelligence governance systems. This distinction resolves the apparent tension between individual psychology and sustainable competitive intelligence theory.

6. CONCLUSION

First of all, childhood anxiety does not necessarily have to be considered as a lifelong disability but it might also be a premature vulnerability to the uncertainty that can be re-contextualized into strategic knowledge when the self-regulatory development is possible to maintain throughout adulthood. This concept is supported with evidence that has demonstrated the overwhelming downstream consequences of childhood anxiety in all spheres of life, which ultimately underscore the fact that the developmental processes of anxiety should be described rather than documented (Pollard et al., 2023).

Second, the conversion process on which threat sensitivity in the early years can be transformed into a cognitively manageable state is emotional regulation. The reinforced control permits the person to be uncertain until he scans, interprets and processes information as opposed to defaulting to avoidance. Continuous presence of anxiety disorders along with factors and what perpetuates them also contributes to the necessity of control-based growth in preventing chronic poor functioning and encouraging adaptive functioning in the uncertainty context (Hovenkamp-Hermelink et al., 2021).

Third, coping strategies constitute the practice layer acting as regulation into standardization of intelligence behaviours. Adaptive coping facilitates involvement in problems based on problem involvement that is consistent with the nature routines of competitive intelligence. Recent summaries support this conformity because they suggest that the results of interventions encouraging active rather than avoidance methods are better (Rapee et al., 2023).

Fourth, the model has a practical implication on the field of early intervention and development of adult capabilities. The preventive and early child intervention outcomes can be favorable in the long-term and the effectiveness of risk process targeting in early age can be proved by long-term outcomes of early CBT-based interventions (Takahashi et al., 2024).

Finally, the model reinforces the conceptualization of competitive intelligence (CI) as a formalized organizational capability rather than a mere informational activity, which makes it consistent with the psychological capability pathways conceptually (Madureira et al., 2021).

6.1 Limitations

- Limitations in design: Causal language in a cross-sectional study, the statement of development should be of form of pathway evidence, rather than statements of definite life-course causality.
- Retrospective childhood measures: Retrospective recall based reporting has an upward biasing impact on effect sizes.
- Sectoral uncertainty, information availability and role expectations: context specificity CI competencies are affected by industry uncertainty, information availability and role expectations; cross-industry generalization must be made to be expressed in an explicit manner.
- Method variance: Surveys should be combined with behavioral tasks or supervisor ratings as self-reports of regulation, coping and CI competence can be all method-biased.
- Intervention inference limitations: Intervention and coping is possible, but the study itself did not point to the fact that training is going to create CI gains; experimental research is required.

6.2 Recommendations on Future study

Longitudinal designs development: follow up the initial anxiety, the regulation pattern, and flexibility of coping and the CI performance in the later years to test the full sequential mediation. Since evidence suggests that anxiety can also be life-long, future models need to directly investigate persistence versus recovery curves as moderators (Hovenkamp-Hermelink et al., 2021).

Intervention based tests in organizations: Explore intervention based on regulation in improving the quality of decisions and performance on CI tasks in high uncertainty jobs. Relevant and workplace-based reappraisal interventions are also encouraging to enhance the effect of affective stability and performance-based outcomes (Zhu et al., 2025).

CI micro foundations on the basis of digital traces data: Scale CI competence measurement to digital information behavior (search diversity, triangulation, time-to-insight). The recent research on CI demonstrates it is possible to transform professional-generated content into CI deliverables and thereby offer more objective competence indicators (Qian et al., 2024).

Emotion-sense making boundary conditions: The study of the interaction between different forms of uncertainty (risk versus ambiguity versus complexity) and regulation mechanisms. The experiments have put forward the notion that social information can manage negative emotions in ambiguity and that it means that there are special pathways where the contexts of uncertainty can regulate emotion-regulation requirements (Bergquist et al., 2025).

Dynamic capabilities alignment: The level of individual to firm sensing is assessed by having CI routines integrated with organisational learning processes (e.g. social media analytics) to learn how coping/regulation capabilities at the individual level. According to SME evidence, CI processes, through the support of analytics-enabled learning routines are also linked with dynamic capabilities (Hassani and Mosconi, 2022; Wu et al., 2023).

Crisis and disruption contexts: Experiment: Does the pathway become stronger when there are shocks (pandemics, supply-chain disruption) where the threat sensitivity may be more salient and regulation more acute? Recent statistics places CI as the mode of functioning in black-swan conditions, which justifies the timeliness of the regulation sensing (Ledi, 2024).

Competitive intelligence should therefore be understood as a structured organizational capability supported by individual-level regulatory competencies. The study does not redefine CI as a psychological attribute; rather, it identifies psychological antecedents that strengthen disciplined participation in intelligence systems that ultimately serve executive decision-making and sustainable competitiveness.

Reappraisal processes /appraisal processes: As reappraisal is at the center of regulation and coping, subsequent studies can investigate the reconstruction of the system of emotion based on appraisal in CI judgment during ambiguity (Scherer, 2023).

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