

## Postprint: Empirical Analysis of Factors Influencing Intelligence Intervention in Decision Error Prevention

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### Abstract

[Purpose/Significance] Intelligence is an indispensable component in decision-making. By analyzing the factors affecting intelligence involvement in decision-making failures, this study broadens the research scope of decision-making error avoidance and holds practical significance for mitigating the risk of decision-making failures. [Method/Process] Based on literature review and theoretical induction, this study adopts a questionnaire survey method to collect data and utilizes SPSS and AMOS analysis software for statistical analysis and empirical research, thereby verifying the applicability of the model. [Results/Conclusions] Through analysis, it is found that management systems have a significant positive impact on intelligence involvement, while intelligence attitude, intelligence culture, and intelligence factors exert indirect influence on intelligence involvement. Only by standardizing system construction can intelligence work be embedded into various stages of the decision-making chain, thereby ensuring scientific decision-making.

### Full Text

## An Empirical Analysis of Influencing Factors of Intelligence Intervention in Decision Failure Prevention

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### Abstract:

[Purpose/Significance] Intelligence is an indispensable component of decision-making. By analyzing the factors that influence intelligence intervention in deci-

sion failures, this study broadens the research scope of decision failure avoidance and holds practical significance for mitigating the risks of decision-making failure.

**[Method/Process]** Based on literature review and theoretical induction, this study employs questionnaire surveys to collect data and utilizes SPSS and AMOS software for statistical analysis and empirical research to verify the applicability of the model.

**[Result/Conclusion]** The analysis reveals that management systems exert a significant positive impact on intelligence intervention, while intelligence attitude, intelligence culture, and intelligence factors influence intelligence intervention indirectly. Only by establishing normative institutional frameworks can intelligence work be embedded into every link of the decision chain, thereby ensuring scientific decision-making.

**Keywords:** failure prevention; intelligence intervention; influencing factors; empirical analysis

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The accelerating trend of globalization, the continuous influx of information resources, and highly uncertain competitive environments have rendered decision-making increasingly complex. Traditional decision-making approaches relying on intuitive “gut feelings” can no longer meet contemporary challenges. Competitive and increasingly complex information environments impose new demands and challenges on decision-making work, making scientific decision-making imperative. Analysis of decision failure cases reveals that when decision-making lacks the full-process support, assistance, and supervision of intelligence work, even minor oversights can lead to failures that inflict substantial losses on enterprises and organizations. Currently, relying solely on the service function of intelligence to support scientific decision-making is insufficient; there is a need to leverage deeper intelligence functions—specifically, the intervention and oversight role of intelligence throughout the entire decision chain. What factors, then, influence the integration of intelligence into the decision chain? How do these factors interrelate? Why do decision failures still occur even when intelligence is accurate? To address these questions, this study focuses on preventing decision failure, explores the relationship between decision-making and intelligence, identifies key obstacles to intelligence intervention in the decision chain through case studies and interviews, proposes hypotheses, and validates them through empirical analysis.

## 2. Related Concepts

### 2.1 Decision Chain Theory

Management scholars describe the phenomenon of “decisions within decisions” as “dynamic decision-making,” meaning that decision-making is not an instan-

taneous action but rather a multi-step, dynamic process [1]. Like a biological chain, any dynamic decision-making process contains an invisible decision chain. As the external environment continuously changes and human cognition evolves during decision implementation, decisions require constant adjustment. The outcome of one decision directly influences the next, creating a series of interconnected decisions that form a “decision chain.” This chain encompasses processes including decision-making, policy implementation, policy evaluation, and re-decision-making, cycling repeatedly until the results meet decision-makers’ needs.

## 2.2 Intelligence Intervention in Failure Prevention

Establishing scientific decision-making procedures constitutes an important safeguard against decision failure, while building a full-process intelligence intervention mechanism represents an effective means to avoid decision errors. “Intelligence intervention” here refers to the conscious involvement or interference of intelligence work in decision-making processes to reduce or prevent decision failures. Through influencing decision-makers, it aims to enable them to grasp the overall decision-making landscape and prevent decision-making entities from developing biases or deviating from normal proactive behaviors. Nobel Economics laureate and renowned decision theorist Herbert Simon divided the decision-making process into four stages, with the first being intelligence needs analysis [2]. “Intelligence intervention” involves not only participating in the first stage of the decision chain to play a guiding and early warning role but also penetrating and intervening throughout the entire lifecycle of decision-making, policy implementation, and policy evaluation. This includes information collection, organization, analysis, and intelligence transmission activities aimed at achieving decision objectives, encompassing a series of activities such as determining decision objectives, assisting in decision formulation, supervising decision implementation, and evaluating execution results [3]. Through intelligence intervention at each link of the decision chain, comprehensive guidance, assistance, and correction can be achieved. The “intervention” in intelligence intervention theory represents a manifestation of power and a coercive means to achieve objectives. It aims to integrate into decision-making processes through high-quality intelligence products, persuasive viewpoints, compelling language, and proactive participation behaviors, representing a form of explicit intelligence influence. Intelligence intervention in the decision chain requires coordination of procedures, specifications, tools, and means, demanding greater initiative from intelligence personnel and relying on the status, independence, objectivity, and comprehensive mechanisms of intelligence agencies.

## 3. Theoretical Framework and Hypotheses for Intelligence Intervention Influencing Factors

Research on full-process intelligence intervention mechanisms throughout the decision chain remains in a conceptual stage, with relatively scarce empiri-

cal studies on factors influencing intelligence intervention in decision-making. Therefore, drawing on intelligence failure, intelligence cognition, and decision-making theories, this study identifies influencing factors of intelligence intervention through analysis of decision failure cases and interviews [4], proposes preliminary hypotheses, and forms an empirical framework for investigating these factors in the context of decision failure prevention.

### 3.1 Influencing Factors of Intelligence Intervention

**3.1.1 Management Systems** Management systems ensure that intelligence work can participate in, intervene in, and oversee decision-making processes through institutional regulations. Sound organizational rules and regulations serve as the bond linking decision-making and intelligence work closely and form the foundation for ensuring smooth intelligence operations. Whether an organization possesses good normative systems determines whether its members will follow established procedures. Intelligence scholar Miao Qihao noted that when discussing think tank independence, the primary purpose of intelligence work is to provide independent judgments for decision-making based on professional expertise—an independence that requires legal norms for constraint and protection [5]. Gao Jinhu pointed out that the U.S. National Security Act stipulates five functions for the Central Intelligence Agency as a subordinate body of the National Security Council and clearly defines the National Security Council as the intelligence institution that intervenes in the decision-making process [6]. Bai Guixiu noted that the U.S. Federal Advisory Committee Act of 1972 explicitly guarantees that recommendations from advisory committees (councils, expert panels, etc.) are not improperly influenced by nominating agencies or special interest groups but rather reflect the committees' own independent judgments. This law safeguards the fairness and objectivity of consultation and advice provided by decision-making advisory institutions, enhances transparency and openness of expert consultation work, and protects the public's right to know [7]. Such legally regulated and protected provisions ensure close connections between intelligence work and high-level decision-makers, broaden channels for intelligence products to be known and adopted by decision-makers, and make intelligence work and decision-making an inseparable whole.

**3.1.2 Intelligence Attitude** Intelligence intervention in the decision chain involves two major workflows: the decision cycle and the intelligence cycle, both of which depend on participating subjects—decision-makers and intelligence personnel. Liu Qiang noted that as users of intelligence products, decision-makers possess the authority to propose intelligence needs and decide whether to adopt them, and their attitudes toward intelligence determine the development direction of intelligence work [8]. Gao Jinhu, in studying the U.S. strategic intelligence and decision-making system, pointed out that decision-makers' decision-making styles and cognition of intelligence directly affect the operation of the intelligence community and the relationship between intelligence and decision-making [6]. U. Joseph explored cognitive differences in intelli-

gence among decision-makers from a psychological perspective, arguing that decision-makers' preconceptions and mirror imaging create cognitive barriers to intelligence products, thereby affecting intelligence utilization [9]. On the other hand, as participants in intelligence work, intelligence personnel's attitudes toward intelligence and their decision-making perspectives determine the quality, objectivity, and service targets of intelligence products (whether they serve decision-making or decision-makers). When intelligence personnel use decision-makers' preferences as the criterion for intelligence work and decision-makers' emotions as the timing for intelligence transmission, they may lose the effectiveness and objectivity of intelligence, causing decision failures.

**3.1.3 Intelligence Culture** Culture provides symbolic meaning for decision-making behaviors and determines the values that shape decision-makers' actions [10]. Different cultures exert different influences on decision-making systems and determine how organizations view intelligence work and whether intelligence can easily intervene in decision-making. Intelligence culture has long-term, subtle influences on intelligence work, affecting people's work methods and behavioral habits at the levels of thought, ethics, and belief. British intelligence reforms discovered that organizational and institutional reforms alone could not solve management and coordination problems because various intelligence units practiced unit protectionism, absolutely opposing their own unit's interests to those of other units and the entire intelligence community, viewing inter-unit relationships from a "zero-sum" perspective. To achieve intelligence management and coordination, it is necessary to break down protectionism and barriers between units, promote cooperation and exchange among intelligence units, establish unimpeded communication channels, and cultivate a collaborative and win-win intelligence culture. The fundamental issue requires transformation through intelligence culture [11]. S. Marrin, in comparing British and American intelligence systems, noted that British intelligence agencies align more closely with decision-making than American agencies precisely because of culture. At the national level, this is strategic culture; at the societal level, popular culture; and at the organizational level, organizational culture. These different cultures influence individual behavior in different ways [12]. P. Davies, after comparing intelligence practices across countries, noted that different countries' intelligence work results from different cultures, which shape the internal connections, orientations, experiences, and influences of intelligence tasks [13]. K. Connell argued that different countries possess different intelligence "types" due to their social, political, and historical contexts, and that these cultures affect intelligence collection and analysis [14]. Chinese scholar Zhao Xiaokang, while defining intelligence culture, noted that the impact of intelligence work and decision-making is mainly reflected in two aspects: decision-making mechanisms and decision-making subjects. At the mechanism level, it primarily manifests in the influence of intelligence politicization issues, while at the individual level, it mainly affects the cognition of decision-makers or intelligence personnel [15].

**3.1.4 Intelligence Factors** Intelligence factors analyze the impact on intelligence intervention from the perspective of intelligence itself. Intelligence failure and error phenomena that lead to decision failures have long been hot topics in intelligence research. R. Betts argued that horizontal factors causing intelligence failure include imperfect intelligence collection methods, intelligence system obstacles, and limitations of intelligence analysis, while vertical factors involve errors in intelligence collection, analysis, evaluation, and transmission processes. He pointed out that to reduce judgment errors, intelligence agencies should more actively participate in the decision-making process [16]. T. Michael believed that the sources of intelligence failure lie in the intelligence agencies' own work, intelligence process errors, and counterintelligence work errors [17]. K. Layman argued that intelligence failure should be explored from three aspects: intelligence agencies' organizational methods, intelligence processing methods, and leaders' personal characteristics [18].

### 3.2 Research Hypotheses

Based on comprehensive analysis of the above influencing factors, the authors contend that improving organizational management systems and decision-making mechanisms constitutes an important factor in avoiding decision failures, and that the soundness of management systems plays a key and decisive role in whether intelligence can intervene in the decision chain. Only by mandatorily embedding intelligence work into decision-making processes through legislation or establishing sound rules and regulations can the role and function of intelligence activities be ensured and protected. As research on the Moore-Kendall and Sherman Kent debate on intelligence-decision relationships points out, decision-makers possess sufficient administrative means and technical methods to influence intelligence work [19], and decision-makers' attitudes have important impacts on whether to adopt intelligence products and how intelligence work should proceed. Decision failure cases also include numerous failures caused by decision-makers' personal preferences and cognitive biases. Therefore, only by establishing mandatory and normative scientific decision-making mechanisms that integrate intelligence work into every link of the decision chain can decision-making be prevented from being subject to individual will and decision-makers' subjective intelligence preferences. That is, when intelligence products cannot meet decision-makers' personal needs but serve decision-making and provide recommendations, they can be incorporated into the decision-making process, fundamentally solving the problem of "intelligence serving decision-making rather than decision-makers." Consequently, this study argues that establishing a full-process intelligence support system is crucial, and that management systems have a direct positive impact on intelligence intervention.

**Hypothesis 1:** Management systems have a positive impact on intelligence intervention in the decision chain.

Decision-makers' attitudes toward and cognition of intelligence constitute the

foundation for organizations to formulate intelligence intervention throughout the entire decision chain. Only by fully understanding the connotation, functions, and roles of intelligence and the benefits it brings to organizational development can decision-makers' emphasis on intelligence work be enhanced, thereby further exploring the deeper role of intelligence in decision-making and increasing the weight of intelligence work in the decision-making process. Simultaneously, intelligence factors themselves are crucial for institutional construction. Only when intelligence organizations are standardized, intelligence processes are rational, intelligence products are accurate, and intelligence personnel work levels improve can intelligence work play an irreplaceable role in organizations. Decision-makers' and intelligence personnel's intelligence attitudes and culture require joint efforts to build through long-term, subtle training, education, and influence. Compared with the stability, accuracy, and strength of institutional construction, culture and attitude are merely soft auxiliary and influencing factors. Therefore, this study argues that intelligence attitude, intelligence culture, and intelligence factors cannot directly affect intelligence intervention in the full decision chain but must exert indirect influence through the mediating variable of management mechanisms (see Figure 1 [Figure 1: see original paper]).

**Hypothesis 2:** Intelligence attitude has a positive impact on management system construction in organizations.

**Hypothesis 3:** Intelligence culture has a positive impact on management system construction in organizations.

**Hypothesis 4:** Intelligence factors have a positive impact on management system construction in organizations.

## 4. Empirical Analysis

### 4.1 Measurement Design

Given the limited research on intelligence intervention in the decision chain and the lack of unified, mature measurement scales, the measurement instrument primarily references Zhao Xiaokang and Jiang Jie's scales on intelligence failure [20], as well as Hou Li's evaluation indicators for decision intelligence systems, combined with assessment scales on intelligence culture and intelligence quality. These were integrated and modified to extract influencing factors, forming two parts: measurement of intelligence intervention phenomena and measurement of influencing factors.

**4.1.1 Measurement of Intelligence Intervention** Intelligence intervention, the dependent variable, refers to the phenomenon of intelligence work participation or interference throughout the decision chain, including decision-making, policy implementation, and policy evaluation. Based on descriptions of the intelligence intervention concept, measurement was conducted from aspects

including the decision formulation stage, decision implementation, and decision evaluation (see Table 1 ).

#### 4.1.2 Measurement of Intelligence Intervention Influencing Factors

The study measured intelligence intervention phenomena in the decision chain from four aspects: intelligence attitude, management systems, intelligence culture, and intelligence factors, forming an initial scale (see Table 2 ).

After completing the initial scale, experts were consulted on item design, statement description, and comprehensibility. To facilitate smooth communication and reduce professional jargon, a pre-test was conducted to ensure questionnaire reliability and validity. Based on 75 questionnaires from the pre-survey, item analysis was performed to examine discriminability. Items not reaching significant critical ratio (CR) values were deleted or modified. After sorting by total score in ascending order, the 20th percentile score ( $75 \times 0.27$ ) yielded a lowest critical value of 176. Sorting in descending order produced the 20th percentile score (151). Using independent samples t-tests, CR values were calculated for each item. Results showed that Q6 did not reach significance. Examining its specific semantics revealed similarity with Q7, as both addressed supervision of the decision-making process, so Q6 was deleted. Although Q24 reached significance, its t-value was small ( $t = 1.445 < 3.000$ ). Further examination revealed that Q24 addressed factors related to stakeholder participation in decision-making rather than cognitive factors, so it was also deleted. The final formal scale contained 42 items.

#### 4.2 Questionnaire Design and Distribution

The questionnaire employed a five-point Likert scale, using a combination of field surveys and online surveys. The study involved five latent variables and 42 measurement items (excluding Q6 and Q24). To ensure normal distribution, the effective sample size needed to be at least five times the number of estimated parameters, requiring a minimum of 210 samples ( $42 \times 5$ ). A total of 400 formal questionnaires were distributed, with 329 returned (82.3% response rate), of which 301 were valid (75.2% valid response rate). SPSS 20.0 was used to analyze demographic characteristics (see Table 3 ).

The sample analysis indicated relatively even distribution across organization types, adequately reflecting intelligence work implementation in different organizational contexts. Regarding respondents' ages, the majority were grassroots management personnel aged 26-35 (53.2%). Grassroots intelligence decision-makers are equally important, as these individuals serve as bridges between senior management and intelligence practitioners, possessing substantial understanding and insights into both types of work. Those with bachelor's degrees or higher accounted for 92% of the sample, indicating a high educational level. Overall, the sample met research requirements.

### 4.3 Data Analysis and Discussion

**4.3.1 Sample Normality and Reliability/Validity Testing** Structural Equation Modeling (SEM) requires samples to meet or approximate normal distribution. Therefore, the mean, standard deviation, skewness, and kurtosis of measurement items were tested. Calculations showed that skewness and kurtosis of all model variable items were less than 1, with absolute kurtosis values less than 8, indicating that the sample met normal distribution requirements. Reliability and validity tests were conducted, with Bartlett's sphericity test statistic at 10,818.870 and corresponding probability significance (Sig) at 0.000, indicating strong correlations among variables and suitability for factor analysis (see Table 4 ). Cronbach's alpha coefficients for all dimensions exceeded 0.8 (see Table 5 ), demonstrating internal consistency and stability.

**4.3.2 Confirmatory Factor and Model Testing** Confirmatory factor analysis represents the first step in SEM [35], primarily testing convergent and discriminant validity. Convergent validity requires standardized factor loadings greater than 0.5 and reaching significant levels. Composite reliability, a criterion for model internal quality, should exceed 0.6 for ideal model quality. Average variance extracted (AVE), a statistic testing internal consistency of structural variables, should ideally exceed 0.5 (0.36-0.5 is acceptable) [36]. After deleting item 16 with excessively low SMC value ( $< 0.36$ ,  $SMC = 0.241$ ), 各项指标见表 6 .

Table 6 shows that standardized factor loadings for all items ranged between 0.607-0.909, all exceeding 0.5. Composite reliability for all latent variables ranged between 0.863-0.954, all exceeding 0.7. AVE values ranged between 0.580-0.634, all exceeding 0.5. Therefore, intelligence intervention, management systems, intelligence culture, intelligence factors, and intelligence attitude passed convergent validity tests, indicating that measurement indicators reflecting the same trait construct loaded on the same factor.

For discriminant validity, common methods include the bootstrap method and AVE method. This study employed the bootstrap confidence interval method, setting 1,000 resamples. AMOS bootstrap provides bias-corrected percentile and percentile methods. Results from both methods (see Table 7 ) show that none of the standardized correlation coefficient confidence intervals contained 1 (which would indicate perfect correlation), demonstrating discriminant validity among all latent variables.

Structural model testing examines relationships between latent variables. The study used AMOS 20.0 with maximum likelihood estimation to test model hypotheses. Absolute fit indices (RMSEA, GFI), incremental fit indices (NFI, CFI), and parsimonious fit indices (PGFI, PCFI, chi-square/df ratio) were selected for evaluation. Fit results appear in Table 8 , with standardized coefficients shown in Figure 2 [Figure 2: see original paper].

Fit indices show:  $RMSEA = 0.051$ , between 0.05 and 0.08, indicating acceptable fit; NFI, CFI, PGFI, PCFI, and  $\chi^2/df$  values achieved good levels. Given the

large number of estimated parameters, R. MacCallum and S. Hong suggest GFI and AGFI values can be relaxed to 0.8 [37], thus meeting standards. Overall, the measurement model passed factor fit index tests with good fit.

**4.3.3 Parameter Estimation and Hypothesis Testing** Maximum likelihood estimation was used to estimate paths between factors. Path coefficients between latent variables appear in Table 9. All four hypotheses passed significance tests, indicating the model is basically reasonable.

## 5. Discussion and Analysis

Research results validate the factors influencing intelligence intervention in decision-making processes and explain why decision failures still occur even when intelligence work is accurate. Individual intelligence factors cannot directly promote intelligence intervention in decision-making; that is, standardized intelligence processes, high-quality intelligence products, and timely intelligence cannot exert direct 推动作用. Decision-makers' styles, personal preferences, and human factors can create obstacles, preventing intelligence products from being adopted and blocking intelligence work from intervening in decision-making processes. Furthermore, from the perspectives of intelligence attitude and intelligence culture, both are non-mandatory factors with strong randomness and fluidity, representing organizational soft power that can only achieve the goal of embedding intelligence into decision processes by promoting institutional construction.

Therefore, this study proposes countermeasures and recommendations from three perspectives: institutional norms, intelligence capabilities, and cultural construction.

### 5.1 Establish and Improve Mechanisms and Norms for Full-Process Intelligence Participation in Decision-Making

Fundamentality, long-term stability, and constancy represent basic characteristics of institutions. By improving decision-making institutional construction and establishing sound mechanisms and norms for full-process intelligence participation, every decision made by decision-makers can follow procedures and regulations with institutional support. This promotes intelligence work, reduces human factors in decision-making processes, and prevents arbitrary decision-making. Four aspects require emphasis: First, prioritize thorough investigation and demonstration before decision-making, emphasizing the primacy of intelligence work. Focus on leveraging the professionalism and independence of intelligence work, conducting pre-decision research to enhance problem-specific objectivity and neutrality, ensuring scientific decision support. Second, improve intelligence error correction and feedback mechanisms during decision implementation. Implementation is the critical step for realizing decisions, during which new situations and problems continuously emerge, and decision-makers'

cognition and understanding deepen through execution. Therefore, by regularly collecting and analyzing signals released during decision implementation activities, intelligence analysis can feed back deviation information and problems, ensuring decision efficiency and effectiveness through supplementary and re-decision-making. Third, establish intelligence supervision and control systems for decision implementation. Strengthen the supervision and inspection functions of intelligence work, focusing on key links, priority areas, and important time nodes in decision-making. Through pre-supervision, real-time supervision, and post-supervision, ensure thorough implementation of decisions. Fourth, implement intelligence evaluation systems for decision outcomes. Through evaluation and diagnosis of implementation results, analyze causes of decision failures, clarify subjects of accountability, scope, methods, and penalties, enhance cognition of erroneous decisions, and avoid recurrence of similar mistakes.

Simultaneously, for intelligence to intervene in decision-making, intelligence personnel must first have the right to know and participate. Relevant laws must be improved to regulate the organizational structure and status of intelligence agencies, clarifying intelligence work responsibilities, processes, operational methods, intervention approaches, and functions during decision-making. This ensures intelligence work has legal foundations and that recommendations are not influenced by human factors or special interest groups but reflect independent and objective judgments.

## **5.2 Enhance Intelligence Operational Capabilities and Elevate Intelligence Influence on Decision-Making**

Intelligence intervention in decision-making processes represents a demonstration of explicit intelligence influence, encompassing intelligence personnel's courage to advocate independent viewpoints, engage in open debate, monitor decision-making processes, correct decision errors, and critically reflect on policy options. Intelligence workers' willingness to speak candidly and critically reflect on policies enhances influence and maintains independence. Through such objective feedback, decision-makers' attention is attracted, prompting them to consider reasons for deviations and control the overall decision-making landscape.

Factors enabling strong intelligence influence include not only legal protection and constraints but also continuously enhanced intelligence operational capabilities. Improving these capabilities requires attention to three aspects: cultivating intelligence personnel's professional competence, strengthening control over intelligence business processes, and enhancing independence consciousness in intelligence work.

### **5.2.1 Establish a Sound Intelligence Education and Training System**

Excellent professional competence among intelligence personnel requires not only individual factors but also continuous learning and training. Compared with foreign intelligence training characterized by diversified educational enti-

ties, varied teaching methods, and integrated talent exchange, domestic intelligence education still suffers from singular educational forms, training entities, and research fields, requiring further improvement in disciplinary system construction. Therefore, first, ideological understanding of intelligence concepts must be strengthened. By analyzing the connotation and extension of intelligence, the “de-secretion” of intelligence should be fundamentally realized, clarifying research content and tasks to continuously expand and enrich intelligence disciplinary theoretical systems. Second, based on multidisciplinary development, “grand intelligence” disciplinary construction should be prospered, building an intelligence science system oriented toward national security and development. This should draw not only rich theories, experiences, and technical methods from information science but also effective intelligence analysis methods and theoretical knowledge from military intelligence, public security intelligence, and border defense intelligence to enrich disciplinary construction. Finally, thinking training and analytical techniques should be introduced into teaching content. Critical thinking training should be introduced to enhance intelligence personnel’s competence by cultivating questioning and truth-seeking orientations, promoting courage to speak candidly, engage in self-criticism, and develop critical thinking. Advanced analytical concepts and structured analytical techniques should also be introduced to improve thinking efficiency and analytical capabilities, reducing and avoiding intelligence failures caused by subjective biases and cognitive biases.

### **5.2.2 Strengthen Management and Control of Intelligence Business**

**Processes** On one hand, work quality at each stage of intelligence business must be improved. Multiple intelligence collection methods, analytical approaches, and processing techniques should be comprehensively applied. The 5W1H (What, When, Where, Who, How) questioning method should be used to deeply explore users’ intelligence needs. A full-source intelligence monitoring perspective should be established to expand information source coverage and collection rates, focusing on weak signal identification and risk signal judgment. Big data analysis methods and structured analytical techniques should be comprehensively applied to improve analysts’ thinking efficiency and analytical capabilities, avoiding cognitive biases and improving intelligence analysis accuracy. On the other hand, intelligence personnel need strengthened communication skills to enable intelligence products to have more diversified presentation forms meeting decision-makers’ varied needs. Finally, standardized operations in intelligence work processes must be highlighted, and intelligence work norms and professional ethics codes must be formulated.

### **5.2.3 Enhance Intelligence Work Independence**

Enhancing intelligence work independence requires construction from two aspects: First, ensure independence of intelligence agency funding sources. As official or affiliated intelligence agencies often lack independent funding and rely on decision-making level support to maintain operations, they tend to produce biased and non-objective

recommendations, unable to guarantee absolute independence. Therefore, actively diversifying funding sources to maintain organizational operations and adjusting funding structure diversity can balance relationships among various interest entities. Second, ensure ideological independence, achieved by improving intelligence personnel's professional competence and professional ethics.

### 5.3 Build a Healthy and Harmonious Intelligence Culture

Intelligence culture represents a group value system requiring joint efforts from organizational members to create and establish. It serves as a booster for smooth intelligence work development. Intelligence culture formation is a continuous development process gradually emerging under the subtle influence of shared values and intelligence values, requiring continuous cultivation of organizational members' intelligence cooperation and sharing spirit to encourage active participation in intelligence work and achieve a harmonious 默契 state. Specific construction methods include: First, establish a top-down development model integrating intelligence culture construction into organizational culture development planning. Organizational culture forms the invisible foundation for organizational development and goal achievement. Harmonious organizational culture guides employee behavior and attitudes. Once organizations incorporate intelligence work into development plans, employees will be motivated to voluntarily participate in intelligence activities and promote intelligence sharing. Second, integrate intelligence work into organizational decision-making activities. As management cannot be separated from decision-making, combining intelligence activities with organizational decision-making behavior can improve decision-making efficiency and effectiveness while establishing intelligence work's status in organizations and promoting intelligence culture. Third, intelligence culture is an open culture requiring continuous learning and absorption of external excellent cultures during growth and development.

## References

- [1] Hou Xiao. The Wisdom and Art of Decision-Making: Quick Methods for Leadership Decision-Making [M]. Shijiazhuang: Hebei Provincial Association for Science and Technology Popularization Department, 1986.
- [2] Simon. New Science of Management Decision [M]. Translated by Li Zhuliu and Tang Juncheng. Beijing: China Social Sciences Press, 1982.
- [3] Hu Yaping, Shen Guchao. From "Intelligence Service" to "Intelligence Intervention": Reflections on the Role of Intelligence from the Perspective of Decision Failure [J]. Journal of the China Society for Scientific and Technical Information, 2017, 36(11): 1130-1138.
- [4] Hu Yaping, Liu Qianli, He Juxiang. Research on Influencing Factors of Intelligence Intervention in Decision Failure Prevention: A Qualitative Analysis Based on Nvivo11 [J]. Library and Information Service, 2019, 63(11): 81-87.
- [5] Miao Qihao. Discussion on Think Tank Independence [EB/OL]. [2019-10-17]. [http://www.360doc.com/content/08/1021/23/13037\\_{1803161}.shtml](http://www.360doc.com/content/08/1021/23/13037_{1803161}.shtml).

- [6] Gao Jinhu. Research on U.S. Strategic Intelligence and Decision-Making System [M]. Xi'an: Shaanxi Normal University Press, 2004.
- [7] Bai Guixiu. Research on Environmental Administrative Licensing System [M]. Beijing: Intellectual Property Press, 2012.
- [8] Liu Qiang. Intelligence Work and National Survival and Development [M]. Beijing: Current Affairs Press, 2014: 185-195.
- [9] Joseph U. The wealth of information and the power of comprehension: Israel's intelligence failure of 1973 revisited [J]. *Intelligence and National Security*, 2008, 10(4): 229-240.
- [10] Liu Feng. Comparison of Chinese and Foreign Administrative Decision-Making Systems [M]. Beijing: National Academy of Governance Press, 2008.
- [11] Wang Qian. British Intelligence Organization Revealed [M]. Beijing: Current Affairs Press, 2011.
- [12] Stephen M. At arm's length or at the elbow?: Explaining the distance between analysts and decision-makers [J]. *International Journal of Intelligence and CounterIntelligence*, 2007, 3(20): 401-419.
- [13] Davies P. Intelligence culture and intelligence failure in Britain and the United States [J]. *Cambridge Review of International Affairs*, 2004, 17(3): 495-520.
- [14] Connell K. Thinking about intelligence comparatively [J]. *The Brown Journal of World Affairs*, 2004, XI(1): 189-199.
- [15] Zhao Xiaokang. Research on the Influence, Model, and Countermeasures of Intelligence Culture [J]. *Journal of Intelligence*, 2010, 29(12): 85-88.
- [16] Betts R. Surprise Attack: Lessons for Defense Planning [M]. Washington, DC: Brookings Institution, 1982.
- [17] Michael T. Why Secret Intelligence Fails [M]. Dulles: Potomac Books. Inc., 2005.
- [18] Layman K. Captains without eyes: Intelligence failures in World War II [M]. New York: Macmillan, 1969.
- [19] Davis J. The Kent-Kendall Debate of 1949 [J]. *Studies in Intelligence*, 1992, 36(5): 91-103.
- [20] Jiang Jie. Enterprise Intelligence Failure: Current Situation, Causes, and Countermeasures [M]. Beijing: Tsinghua University Press, 2014.
- [21] Handel M. Leaders and Intelligence [M]. London: Frank Cass Publishers, 1989.
- [22] Moore D. Evaluating intelligence: A competency-based model [J]. *International Journal of Intelligence and CounterIntelligence*, 2005, 18(2): 204-220.
- [23] Chen Ming, Ling Yunxiang, Jiang Chengjun, et al. Research on integrated linkage mechanism of counter-terrorism intelligence and decision-making and action [J]. *Library and Information Service*, 2014, 58(23): 19-25.
- [24] Fan Wei, Hu Kanglin. Research on the supporting role of intelligence for emergency decision-making in sudden incidents [J]. *Information Studies: Theory & Application*, 2010, 33(9): 12-16.
- [25] Zhao Xiaokang. Research on Intelligence Failure Leading to Decision Failure: Cause Decomposition and Empirical Model [J]. *Information Studies: Theory & Application*, 2006, 39(5): 53-68.

- [26] Yang Qiaoyun, Yao Leye. Collaborative linkage emergency decision-making intelligence system: Connotation and path [J]. *Information Science*, 2016, 34(2): 27-31.
- [27] Bao Changhuo, Zhang Yan, Huang Ying. The Rise and Development of Competitive Intelligence [C]//*Advances in Information Science* (Vol. 5). Beijing: National Defense Industry Press, 2003: 360-362.
- [28] Liu Minrong. *Competitive Intelligence Practice* [M]. Fuzhou: Fujian Science and Technology Press, 2008.
- [29] Sun Shaocong, Jin Juanjuan. Research on the construction of national security and counter-terrorism intelligence crisis decision-making mechanism [J]. *Journal of Intelligence*, 2017, 36(3): 7-12.
- [30] Guo Chunxia, Zhang Jing. Research on the construction of rapid response intelligence system for emergency decision-making in sudden incidents [J]. *Information Studies: Theory & Application*, 2006, 39(5): 53-68.
- [31] Gong Hongguang, Tang Shanong. Establishing a process-based intelligence research knowledge support system for decision-making needs [J]. *Information Studies: Theory & Application*, 2012(2): 1-5.
- [32] Elder G. Intelligence in the War: It can be decision [J]. *Studies in Intelligence*, 2006, 50(2): 32-36.
- [33] Hou Li. Construction of evaluation index system for decision-making-based intelligence system [J]. *Information Studies: Theory & Application*, 2009(1): 105-108, 104.
- [34] Zhou Wenjie. Principles and models for calculating competitive intelligence value in risky decision-making [J]. *Journal of Intelligence*, 2014, 33(12): 20-24.
- [35] Zhang Weihao. *Comparison and Selection of Loyalty Competition Models* [D]. Tainan: National Cheng Kung University, 2011.
- [36] Wu Minglong. *Structural Equation Modeling: AMOS Operation and Application* [M]. Chongqing: Chongqing University Press, 2010.
- [37] MacCallum R, Hong S. Power analysis in Covariance Structure Modeling using GFI and AGFI [J]. *Multivariate Behavioral Research*, 1997, 32(2): 193-210.

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Hu Yaping: Responsible for topic selection, data analysis, and paper writing;

Shi Jin: Responsible for structural design and questionnaire assistance;

Dong Yin: Responsible for questionnaire distribution and data analysis.

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**An Empirical Study of the Influential Factors on Intelligence Intervention in the Prevention of Decision Failure****Hu Yaping<sup>1</sup>, Shi Jin<sup>2</sup>, Dong Yin<sup>3</sup>**

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**Abstract:** [Purpose/Significance] Intelligence is an indispensable part of decision-making. By analyzing the factors affecting intelligence intervention in decision-making failures, this study broadens the scope of research on preventing decision-making errors and has practical significance for avoiding the risk of decision-making failure. [Method/Process] Based on literature review and theoretical induction, this study uses questionnaire surveys to collect data and employs SPSS and AMOS software for statistical analysis and empirical research to verify the applicability of the model. [Result/Conclusion] The analysis shows that management systems have a significant positive impact on intelligence intervention, while intelligence attitude, intelligence culture, and intelligence factors have an indirect impact on intelligence intervention. Only by constructing a normative management mechanism can intelligence work be embedded into all aspects of the decision chain to ensure scientific decision-making.

**Keywords:** failure prevention; intelligence intervention; influencing factors; empirical analysis

*Note: Figure translations are in progress. See original paper for figures.*

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