The Relationship Between National Intelligence Assessment and Decision-Making: A Dual Perspective from Multiple Streams Theory and Cognitive Psychology (Postprint)

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Abstract

[Purpose/Significance] National Intelligence Estimates are considered the most formal and highest-level strategic analytical product of the U.S. intelligence community. An in-depth study of the relationship between National Intelligence Estimates and decision-making can help our country improve its scientific decision-making system and greatly benefits the modernization of the national governance system. [Method/Process] Based on the Multiple Streams Framework and cognitive psychology, this study constructs an influence mechanism model of National Intelligence Estimates and decision-making from the perspective of advice adoption, and uses fuzzy-set Qualitative Comparative Analysis (fsQCA) to analyze cases from countries such as the United Kingdom and the United States. [Results/Conclusion] The study shows that interest claims and coordination constitute the only necessary condition for the adoption of National Intelligence Estimates results, and reveals three conditional configuration paths for the relationship between National Intelligence Estimates and decision-making under emergency and non-emergency events.

Full Text

The Relationship Between National Intelligence Estimates and Decision-Making: Based on Dual Perspectives of Multiple-Streams Theory and Cognitive Psychology

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Abstract: [Purpose/Significance] The National Intelligence Estimate is regarded as the most formal and highest-level strategic analysis product of the U.S. intelligence community. An in-depth study of the relationship between national intelligence estimates and decision-making can help China improve its scientific decision-making system and greatly benefit the modernization of national governance. [Method/Process] Based on multiple-streams theory and cognitive psychology, this paper constructs an influence mechanism model of national intelligence estimates and decision-making from the perspective of advice adoption, and analyzes cases from the United Kingdom, the United States, and other countries using fuzzy-set qualitative comparative analysis (fsQCA). [Result/Conclusion] The study shows that interest proposition and coordination is the only necessary condition for the adoption of national intelligence estimate results, and reveals three conditional combination paths of the relationship between national intelligence estimates and decision-making under emergency and non-emergency events.

Keywords: National Intelligence Estimates; Decision-Making Analysis; Multiple-Streams Theory; Cognitive Psychology; fsQCA **Classification Number:** G250 **DOI:** 10.13266/j.issn.0252-3116.2022.02.003

President Xi Jinping has emphasized in his speeches on the decision-making research and demonstration system: "We must improve the pre-evaluation and post-assessment systems for major policies, open channels for participation in policy formulation, and enhance the scientific, democratic, and law-based nature of decision-making." This points the way for us to strengthen our awareness of the overall situation, establish dialectical thinking, and improve decision-making quality through scientific methods and standardized procedures. The decision-making system is the central nervous system of China's political structure and a key factor determining China's development [1]. One important reason why our Party has overcome difficulties and maintained its centennial glory is its emphasis on decision-making, especially at this critical moment when China continues to rise and the dream of national rejuvenation advances. A few hegemonic countries led by the United States constantly provoke incidents, and confrontation with China gradually escalates [2-3]. However, the more conflict-ridden the environment, the more we must give full play to the important supporting function of intelligence in various decisions [4]. Good intelligence does not necessarily produce wise decisions, but without accurate intelligence support, national policy decisions and actions cannot effectively reflect actual conditions or represent the nation's highest interests [5]. Through effective analysis, comparison, reasoning, judgment, and synthesis of intelligence, we can reveal the inherent changing patterns of research objects and their connections with related matters [6]. For example, on April 8, 2021, the U.S. National Intelligence Council (NIC) released the report "Global Trends 2040: A More Contested World," forecasting and assessing the forces and dynamics that may shape the national security environment in the next 20 years, providing the U.S. government with a framework for evaluating future global strategies and a foundation for decision-making. Therefore, we should use intelligence to do a good job in pre-evaluation

of major decisions and improve the level of scientific decision-making.

The importance of national intelligence estimates has gradually attracted attention. Existing research on national intelligence estimates involves their content [7-8], institutions [9], and theoretical development [10]. Although preliminary frameworks for the connotation, principles, and elements of national intelligence estimates have been conceived, research on the operational mechanism between national intelligence estimates and strategic decision-making is still lacking. Therefore, excavating the key factors affecting national intelligence estimate work and decision-making can effectively build a bridge between the national intelligence estimate system and the decision-making mechanism, thereby improving the quality and effectiveness of national intelligence estimates. Additionally, existing research on intelligence-supported decision-making mechanisms mostly discusses how to transform data into evidence-based scientific decision-making systems and methods [11-12], while real decision-making behavior differs greatly from traditional economic theory expectations because human bounded rationality and social environmental factors may all affect decision-making outcomes. Therefore, how to truly improve the influence of national intelligence estimate products in the decision-making mechanism and enhance the important position of national intelligence estimate agencies in decision-makers' cognition depends not only on the actual performance of assessment agencies but also on decision-makers' understanding of national intelligence estimates and people's understanding of the relationship between assessment results and decision-making. Thus, merely discussing the construction of the national intelligence estimate system is insufficient; we also need to understand how national intelligence estimates, as a policy process, select issues, evaluate them, and are ultimately favored by decision-makers to become important bases for strategic decision-making.

In view of this, this study will, based on scholar Gao Jinhu's research on strategic intelligence work [13], deeply analyze the relationship between national intelligence estimates and decision-making, attempting to excavate the hidden influence mechanisms behind this relationship, and answer what kind of national intelligence estimate work and its results can receive maximum support for decision-making. Specifically, this study will, based on an analysis of Kingdon's multiple-streams theory and cognitive psychology theory, combined with the national intelligence estimate process, focus on three aspects affecting the relationship between national intelligence estimates and decision-making: problem stream, policy stream, and political stream. It will construct a relational model of national intelligence estimates and decision-making, and combine 20 representative cases of national intelligence estimates from the United States and the United Kingdom, using fuzzy-set qualitative comparative analysis (fsQCA) to examine the theoretical framework, clarify the internal mechanism affecting the relationship between national intelligence estimates and decision-making, and provide references for improving China's national intelligence estimate system, thereby enhancing the fit between assessment results and decision-making and increasing the utilization rate of assessment products.

1 Theoretical Foundation

1.1 Multiple-Streams Theory

In 1984, Kingdon proposed the Multiple-Streams Theory, which is a revision of Cohen's "Garbage Can Model." From a decision-making perspective, it proposes that three streams exist in the policy process. They are independent of each other and do not intersect, but when they converge at a certain time, they can help complete decision-making—that is, what Kingdon calls the "policy window" opens and related issues are placed on the policy agenda [14].

Meanwhile, Kingdon further runs ambiguity throughout his theory, building on Cohen's stream analysis model. Conceptually, ambiguity is generally considered a state arising from different ways of thinking about the same phenomenon. Ambiguity may stem from the limitations of one's own knowledge, information asymmetry, or the contradiction between human bounded rationality and complex objective phenomena. In organizational decision-making, this ambiguity is manifested in that decision-making activities and formulation may be influenced by the behavioral preferences of organizational members because people are accustomed to previously selected or conventional solutions. To clearly describe ambiguous situations, scholars propose the role of policy entrepreneurs, which more clearly identifies the main body of decision-making activities, making decision-making an organized activity that can be specifically analyzed rather than an anarchic process [15]. Additionally, Kingdon proposes the policy window to depict opportunities for issues to be adopted, which becomes the key to whether decision-making activities succeed [16].

Multiple-streams theory completely describes the reasons why issues are valued, attract decision-makers' attention, and are incorporated into the policy agenda [17], which can help us effectively open the "black box" of the political system and deeply understand the irrational and complex phenomena in the policy-making process [18]. Similarly, the National Intelligence Estimate, as the most formal and highest-level strategic analysis product of the U.S. intelligence community [19], often plays an irreplaceable role in major strategic decision-making. However, whether national intelligence estimate work can play a leading role is closely related to users' understanding of assessment results, the actual performance of national intelligence estimate agencies, and understanding of the relationship between strategic intelligence and decision-making. This means that, like general policy agenda processes, national intelligence estimates involve which issues are identified as needing assessment, how various stakeholders in national intelligence estimates game against each other, and whether final assessment results can be favored by decision-makers to ultimately open the policy window for adoption. The irrational mechanisms behind this also need to be explored. However, the difference from conventional policy agendas is that national intelligence estimates need to collect foreign high-level intelligence, and the assessment process involves comprehensive analysis and repeated deliberation of large amounts of national security intelligence, which must be completed

by professional intelligence assessment agencies under non-public circumstances [20], with final decision-making and adoption authority always in the hands of the highest decision-makers such as the president.

1.2 Multiple-Streams Theory's Three-Layer Structural Framework for National Intelligence Estimates

Based on the characteristics of national intelligence estimates and drawing on multiple-streams theory, this study interprets why national intelligence estimate reports are ultimately adopted by policymakers. According to multiple-streams theory, we can understand the relationship between national intelligence estimates and their adoption from three aspects: problem stream, policy stream, and political stream.

First, the problem stream explains how issues attract relevant parties' attention, such as a focal event, a change in indicators, a popular symbol, or a crisis. It can explain which national intelligence estimate issues are more likely to be valued by decision-makers, so these valued national intelligence estimate results can receive full examination from decision-makers and thus influence decision-making.

Second, the policy stream is the process where policy proposals are generated, discussed, redesigned, and valued, completed jointly by professionals in specific policy fields. They use various opportunities to express their views on certain issues, argue for proposals beneficial to themselves, and strive to get their proposals adopted by policymakers. However, these professional groups may have harmonious, close relationships or may be confrontational and divided. This perspective can be used to illustrate that in national intelligence estimates, various intelligence departments participate in the assessment process. They are obligated to provide intelligence materials related to their fields and are also responsible for participating in the drafting and deliberation of assessment reports. Therefore, the production process of national intelligence estimates is essentially a process of coordination and gaming among representatives of various interest subjects. Precisely because of this, national intelligence estimates can better reflect the understanding of the entire intelligence community rather than being the result of one voice alone [10].

Finally, the political stream is the political process that influences problem resolution, manifested either as the distribution of political parties and ideologies in Congress or as election results. Combined with the usage characteristics of national intelligence estimate products, this study will mainly discuss how high-level leaders such as presidents, as policymakers, make irrational choices due to their own ambiguity. As Kingdon stated, ambiguity in preferences and identities leads to self-ambiguity when choosing actions and causes irrationality in problem-solving. Consequently, decision-makers often exhibit irrational behavior when finally choosing whether to adopt national intelligence estimate products.

In summary, the three-stream analysis approach of multiple-streams theory provides theoretical support at three structural levels for our research on problem setting in national intelligence estimates, interest gaming during the assessment process, and whether assessment results can be adopted by decision-makers. Among them, in the decision-maker adoption stage, if we treat decision-makers as purposeful actors, once we find the "purposes and goals" of this decision-making subject, most of their behavior can be well explained [21]. Therefore, this study introduces cognitive psychology theory to deeply analyze the influence mechanism of individual behavior in the decision-making adoption stage.

1.3 Cognitive Psychology Theory

Cognitive psychology theory, represented by the Stanford School, advocates using decision-makers' subjective cognition and internal psychological variables to explain the decision-making process [22], focusing on explaining how people's cognitive levels affect specific behavioral choices and decisions. Representative scholar Robert Jervis directly uses personal preferences and beliefs to explain national-level decision-making [23].

The cognitive perspective indicates that there is an intermediate environment (i.e., the cognitive process) between external stimuli and behavioral choices for decision-makers. The most important aspect of this process is defining the environment, upon which basis decision-makers can effectively judge and make corresponding behaviors. Therefore, the cognitive perspective reflects a special viewpoint from outside to inside, from top to bottom, and from macro to micro, with its focus on "subjectivity" and "representation," thus generating actors' irrational behavior based on incomplete information. The psychological perspective indicates that psychological motivation, needs, and emotional states influence decision-makers' judgments, emphasizing the internal sources and causes of behavior and believing that all behavior has its own motives and purposes. It is evident that the cognitive-psychological model is a complex operating mechanism, and each individual has their own characteristics. This study mainly explores the cognitive and psychological factors that influence decision-makers when deciding whether to adopt national intelligence estimate results, thereby explaining the irrational behavior present in their decision-making.

From a cognitive perspective, referencing scholar Zhong Kaibin's research and the characteristics of national intelligence estimates, we believe that decision-makers' cognition regarding whether to adopt assessment results is mainly influenced by four factors [22]: Experience cognition: Decision-makers make judgments based on analogies between past experiences and current situations; Expectation cognition: Decision-makers tend to see what they want to see, embed new information into existing frameworks, and ignore or distort information that does not support existing impressions and frameworks; Social structure and culture/environment: Decision-makers are inevitably influenced by social and organizational culture, structure, environment, and other factors when making decisions. Meanwhile, from a psychological perspective, referencing Wang

Dalong et al.'s research [24] and the characteristics of national intelligence estimates, we believe that decision-makers' psychology regarding whether to adopt assessment results is mainly influenced by mental set and trust. Among them, mental set can manifest as the halo effect, indicating that decision-makers have biases toward certain types of information or intelligence due to emotional factors, thus selectively ignoring such results in actual decision-making processes; Trust: Decision-makers unconditionally accept assessment results because they trust the national intelligence estimate team or its leaders.

In summary, this study further explains through cognitive psychology theory that decision-makers may be influenced by cognitive and psychological factors when choosing whether to adopt national intelligence estimate results. These mainly include cognitive factors such as experience cognition, expectation cognition, and social structure/cultural environment, as well as psychological factors such as mental set and trust. Combined with multiple-streams theory, these jointly support the relationship between national intelligence estimates and decision-making, forming the theoretical model of this study, as shown in Figure 1 [Figure 1: see original paper].

2 Influence Mechanism Model of National Intelligence Estimates and Decision-Making

Based on the above review, this paper focuses on three aspects affecting the relationship between national intelligence estimates and decision-making: problem stream, policy stream, and political stream. It constructs an influence mechanism model of national intelligence estimates and decision-making that includes seven variables: emergency events, interest proposition and coordination, cognitive factors (including experience cognition, expectation cognition, social structure and cultural environment), and psychological factors (including mental set and trust), as shown in Figure 1, to better understand and grasp the relationship mechanism between national intelligence estimates and decision-making.

2.1 The Influence of Emergency Events on Decision-Making

This study believes that when national intelligence estimate issues are emergency events—that is, events with suddenness, limited time resources, and the need for immediate action to avoid harm [25]—they affect decision-makers' attitudes and behaviors toward adopting assessment results. Because time pressure significantly influences decision-makers' search strategy preferences [26]. Scholars believe that decisions corresponding to emergency events are made under conditions of insufficient information and time, facing pressures from all sides, which requires decision-makers to make relatively scientific decisions from a professional perspective within limited time. National intelligence estimate reports can provide the most valuable and scientific professional assessment results in a short time, thus increasing the likelihood that decision-makers will adopt national intelligence estimate reports targeting emergency events.

Moreover, responding to emergency events is often complex [25]. Research has found that governance tasks make unilateral action plans unsustainable, and only bilateral or multilateral interactions can become important ways to solve problems. This situation motivates decision-makers to launch cross-departmental joint actions and arbitrarily mobilize authoritative actions using various institutional resources to address uncertainty [27]. Precisely because of this, national intelligence estimate work can mobilize diversified resources from the joint intelligence community and enable representatives from various agencies to participate in the formulation and deliberation of assessment reports, thereby prompting decision-makers to pay attention to national intelligence estimate work where assessment subjects participate in discussions and finalize reports. Its assessment results can fully express and coordinate the interests of various interest subjects. In other words, because national intelligence estimates have a strong interest proposition and coordination mechanism, they can meet decision-makers' needs and thus influence the likelihood of adoption. This study examines emergency events as a variable affecting whether decision-makers adopt national intelligence estimate reports.

2.2 The Influence of Interest Proposition and Coordination on Decision-Making

This study believes that the interest proposition and coordination mechanism in the national intelligence estimate process affects decision-makers' attitudes and behaviors toward adopting assessment results. Generally, in the drafting and finalization discussions of national intelligence estimates, representatives from various intelligence departments participate jointly and follow procedures of repeated consultation and analytical review [10]. In this process, subjects representing different organizational interests engage in gaming, and these competing interest organizations attempt to influence decision-making to serve their own interests. Decision-making inevitably involves multiple factors, presenting a complex state, while interest gaming is a correction mechanism in the decision-making process that can prevent conflicts caused by unfair interest distribution. Therefore, government decision-making balances various interests to achieve equilibrium. Research also proposes that interest measurement must be conducted before administrative decision-making, considering all parties that will be positively and negatively affected, and ensuring that as many people as possible can equally benefit from or be harmed by the decision. Therefore, by integrating multiple intelligence resources and the demands of multiple stakeholders, the most effective criteria can be formulated in the process of pursuing fair interest distribution.

2.3 The Influence of Cognitive Factors on Decision-Making

Cognition is an important characteristic of individuals, affecting not only their perception but also their behavioral choices [29]. National intelligence estimate departments provide assessment products, and decision-makers decide whether

to adopt them. This is an interactive process, and decision-makers' cognitive complexity and cognitive style will influence their adoption behavior. Based on this study's needs, we believe cognitive factors include experience cognition, expectation cognition, and social structure/cultural environment.

2.3.1 Experience Cognition Existing research shows that managers' experiences profoundly influence their internal psychological characteristics and behavioral patterns, thereby affecting their decision-making behavior [30]. Because managers' brains are like interactive storage devices, each accumulation of different cognitive foundations, experience skills, and knowledge systems from various experiences becomes the starting point and foundation for the next experience. Meanwhile, scholar Gao Jinhu proposes that decision-makers' experiences have a significant impact on their intelligence concepts. Generally, presidents with academic backgrounds but no military experience have insufficient understanding of intelligence value. Therefore, this study believes that the analogy between decision-makers' past experiences and current situations forms a certain experience cognition that affects their adoption of certain national intelligence estimate reports.

2.3.2 Expectation Cognition Research shows that under high uncertainty, decision-makers expect to see what they hope to see, tend to embed newly received information into existing impression frameworks, and ignore or distort information that does not support existing impressions and frameworks [22]. Such expectation cognition also influences decision-makers when deciding whether to adopt assessment reports. Therefore, this study incorporates expectation cognition into the research framework.

2.3.3 Social Structure and Culture/Environment Hu Yaping et al.'s research directly shows that different cultures have different impacts on decision-making, determining how organizations view intelligence work [32]. In decision-makers' vision, everything in the world is interconnected, and events occurring in one place will affect local or many other places. Therefore, decision-makers usually consider intelligence within a larger structural environment. Meanwhile, increased pressure caused by changes in the external environment can easily lead to changes in decision-makers' sense of security [33]. Scholar Gao Jinhu believes that the international environment decision-makers face affects their intelligence concepts. When the international environment is harsh, their cognition of intelligence is positive; otherwise, it is relatively negative. Similarly influential is the domestic environment decision-makers face, which is a social state composed of multiple social fields and multiple social subjects with multiple interests. This complex social system affects decision-making and their attitudes toward intelligence agencies [34]. The same view is also proven by scholars such as Rathbun, who believe that the decision-making process is inevitably affected by environmental characteristics, including uncertainty and complexity of the external environment and power structure of the internal environment [35]. Therefore,

this study also incorporates social structure and culture/environment into the research framework.

2.4 The Influence of Psychological Factors on Decision-Making

Psychological factors are manifested in the influence of psychological motivation, needs, and emotional states on decision-makers' judgments, emphasizing the internal sources and causes of behavior and believing that all behavior has its own motives and purposes. This study believes that mental set and trust, as important aspects of psychological factors, can influence decision-makers when adopting national intelligence estimate reports.

2.4.1 Mental Set In this study, mental set refers to intelligence decision-makers having biases toward certain types of information or intelligence due to emotional factors. Because intelligence decision-makers develop this irrational understanding, they selectively ignore this information or intelligence in actual decision-making, ultimately causing deviation from the established direction. Therefore, under the influence of mental set, decision-makers ignore positive or negative signals contained in intelligence, preventing intelligence effectiveness from manifesting [24]. Consequently, this study believes that the mental set factor, where decision-makers selectively ignore assessment results due to motivational bias, will affect their adoption of certain national intelligence estimate reports.

2.4.2 Trust Existing research shows that trust in advisors can predict the degree to which judges accept advice [36]. In this study, trust may stem from the professional capabilities of national intelligence estimate agencies, from the confidence and friendly qualities of assessment agency leaders, or from positive relationships between decision-makers and national intelligence estimate leaders. The higher this trust level, the greater the weight of assessment products in final decision-making. When judges face difficult and important decisions, trust based on friendliness is more important than trust based on expertise [37]. Therefore, this study incorporates trust into the research framework.

3 Research Design

3.1 Research Method and Data Sources

fsQCA uses fuzzy-set scores to represent the degree to which outcomes and explanatory conditions occur. In principle, its scores can be any value between 0 and 1, thus better avoiding information loss during data transformation and more accurately reflecting actual case conditions [38-39]. This paper uses this method to test how seven explanatory factors—emergency events, interest proposition and coordination, experience cognition, expectation cognition, social structure and culture, mental set, and trust—interact to jointly influence

decision-making. A total of 20 representative cases of U.S. and U.K. national intelligence estimates and decision-making were selected, as shown in Table 1 :

Table 1 Case Samples 1. 1939 UK "Assessment of German Aircraft Production Capacity" 2. 1947 UK "Joint Assessment of Soviet Nuclear Program" 3. 1958 US "Development Trends in the Taiwan Strait Region" 4. 1958 US "Soviet Objectives in the Berlin Crisis" 5. 1964 US "Major Development Trends in the Arab World" 6. 1968 UK "Assessment of Prague Spring" 7. 1969 US "Assessment of Israeli Nuclear Weapons" 8. 1976 US "Soviet Armed Forces for Intercontinental Conflict Through the Mid-1980s" 9. 1982 UK "Argentina's Move to Occupy the Falkland Islands" 10. 1981 US "Prospects for Poland in the Next Six Months" 11. 1983 US "The Coming Yugoslav Crisis" 12. 1985 US "Soviet Prospects and Options on Afghanistan in the Coming Year" 13. 1990 US "Assessment of Iraq's Annexation of Kuwait" 14. 1992 US "Saddam Likely to Remain in Power" 15. 1995 US "Missile Threats to North America in the Next Fifteen Years" 16. 2002 UK "Assessment of Iraqi Weapons of Mass Destruction" 17. 2006 US "Trends in Global Terrorism: Implications for the United States" 18. 2006 US "Prospects for Stability in Iraq: A Challenging Road Ahead" 19. 2007 US "Iran: Nuclear Intentions and Capabilities" 20. 2015 UK "UK National Security Strategy and Strategic Defence and Security Review"

Note: Cases are mainly selected from books, journal articles, and news reports such as "Research on U.S. Strategic Intelligence and Decision-Making System" and "Selected U.S. National Intelligence Estimate Reports"

3.2 Variable Coding

This study uses "continuous" fuzzy sets to determine membership degrees, setting three qualitative anchors: full membership at 1, full non-membership at 0, and crossover point at 0.5 [40]. After determining variables, data were summarized with each case as a unit [41], with specific judgment criteria shown in Table 2 :

Table 2 Variable Judgment Criteria - **Emergency Events:** - 1.0: National intelligence estimate reports closely related to national development requiring immediate action - 0.5: National intelligence estimate reports somewhat related to national development requiring consideration of event impact and response options - 0.0: Routine national intelligence estimate reports conducted on certain issues - **Interest Proposition and Coordination:** - 1.0: In drafting and finalizing national intelligence estimates, representatives from various intelligence departments participate jointly in repeated consultation and analytical review procedures - **Experience Cognition:** - 1.0: Decision-makers judge national intelligence estimate reports based on old or commonly used experiences - **Expectation Cognition:** - 1.0: National intelligence estimate reports are consistent with decision-makers' expectations - **Social Structure and Culture/Environment:** - 1.0: National intelligence estimate report content is related to social and organizational culture, structure, and environment - **Men-**

tal Set: - 1.0: Decision-makers selectively ignore national intelligence estimate reports due to motivational bias - **Trust:** - 1.0: Decision-makers choose national intelligence estimate results made by people or teams they trust

4 Data Statistics and Results Analysis

4.1 Necessity Analysis

In this study, through single-variable necessity analysis, among the seven variables, the consistency index value of the interest proposition and coordination variable exceeds 0.9, as shown in Table 3 , indicating that the interest proposition and coordination indicator can be a necessary condition for the adoption of national intelligence estimate reports [42].

Table 3 Single-Variable Necessity Analysis - Interest Proposition and Coordination: Consistency = 0.92, Coverage = 0.78 - Emergency Events: Consistency = 0.71, Coverage = 0.65 - Experience Cognition: Consistency = 0.68, Coverage = 0.58 - Expectation Cognition: Consistency = 0.62, Coverage = 0.52 - Social Structure and Culture/Environment: Consistency = 0.55, Coverage = 0.48 - Mental Set: Consistency = 0.45, Coverage = 0.38 - Trust: Consistency = 0.85, Coverage = 0.81

On the one hand, interest group coordination is determined by the characteristics of the British and American political systems. The separation of powers and checks and balances cause the decentralization of decision-making centers and power centers throughout society. For example, although the U.S. President has direct authority to decide on the adoption of national intelligence estimates, an absolute “imperial presidency” does not exist. The president, Congress, and various interest-related subjects continuously compete in policy formulation. Moreover, in the UK and U.S., more interest propositions exist in the decision-making process, encouraging different viewpoints and supporting different interest groups to form multiple political influences. This influence is manifested not only in competition between Congress and top leaders but also prominently among various administrative agencies, reflecting political entrepreneurship in political influence.

On the other hand, from a policy process perspective, existing research shows that if we set aside the adjustment of interest issues, interest relationships, and resolution of interest contradictions in the analysis of the entire policy process, policies cannot solve any problems. Therefore, this determines that the adoption process of national intelligence estimates with policy characteristics requires coordination and integration of various interests in reality. Only when assessment reports represent the positions of various intelligence communities can the most effective criteria be formulated in the process of pursuing fair interest distribution.

Meanwhile, the trust variable has a relatively high coverage value, exceeding 0.8, and its consistency index value reaches the sufficient condition threshold of

0.8, making its importance obvious among these seven variables. This indicates that decision-makers' trust in advisors, as a single variable related to national intelligence estimate adoption, has considerable explanatory power in independently promoting the adoption of national intelligence estimate reports. That is, decision-makers' subjective cognition of the assessment team and its leaders can influence their judgments and change their views on certain issues during this period. Because national intelligence estimate reports reflect specialized knowledge in certain fields to provide specific knowledge supply for decision-making, but the intelligence analysis process cannot be completely separated from decision-making, so reports inevitably contain certain value judgments and emotional choices. In specific contexts, national intelligence estimates also become defenders of established roles, attempting to establish effective evidence to "persuade" opposing voices [43]. Therefore, regardless of whether decision-makers' trust stems from recognition of the professionalism of national intelligence estimate work or trust in the work leaders, it will affect the degree to which decision-makers adopt national intelligence estimate reports.

4.2 Combination Factor Analysis

After conducting single-variable necessity analysis, we analyze whether it is triggered by combinations of multiple different conditional variables. Providing a scientific and reasonable explanation for this is another focus of this study. Therefore, this study uses the operation results of intermediate solutions and simple solutions for specific analysis, obtaining three micro-level conditional combination paths affecting the adoption of national intelligence estimate reports, as shown in Table 4 . Based on whether the focal issue is an emergency event, they are divided into two categories:

4.2.1 Relationship Between National Intelligence Estimates and Decision-Making Under Emergency Events Table 4 shows the existence of a conditional combination path: Emergency Events * Experience Cognition * Trust, with cases that can only be explained by this combination factor accounting for 14% of total cases. This combination means that when the assessment issue is an emergency event, the two factors of experience cognition and trust play important roles in influencing the adoption of national intelligence estimate reports. The superposition of these three factors ultimately affects whether national intelligence estimate reports are adopted by decision-makers. For example, George H.W. Bush, the 51st and 41st U.S. President who once served as CIA Director, had profound understanding and positive attitudes toward intelligence work, better recognized the important value of intelligence estimates, and had strong trust in national intelligence estimate work. Therefore, when Iraqi President Saddam Hussein invaded Kuwait and violated U.S. interests, regarding whether to launch the Gulf War, the national intelligence agency conducted serious assessments, comprehensively analyzing the status and attitudes of multiple interest-related subjects including the Soviet Union, the Middle East, and Western allies, as well as Iraq's economic

conditions, security situation, and Arab-Israeli contradictions after Saddam's overthrow, ultimately determining that war was beneficial to the United States. Consequently, President Bush adopted this report and launched the Gulf War jointly with 40 countries worldwide (with 34 sending troops).

4.2.2 Relationship Between National Intelligence Estimates and Decision-Making Under Non-Emergency Events Table 4 shows that under non-emergency events, the combination path is: ~Emergency Events * Interest Proposition and Coordination * Expectation Cognition * Social Structure and Culture/Environment * ~Mental Set * Trust, with cases that can only be explained by this combination factor accounting for 32% of total cases. This path indicates that in non-emergency situations, when the national intelligence estimate process coordinates the needs of various interest-related subjects, is influenced by the external environment, when the national intelligence estimate report content matches what decision-makers expect to see, and when there is trust in the assessment work, the superposition and aggregation of these four factors enhance the opportunity for national intelligence estimate reports to be adopted. For example, Dwight D. Eisenhower, the 34th U.S. President, had military experience and wartime experience that made him recognize the importance of intelligence agencies. He trusted national intelligence estimate departments and required that every policy document issued by the National Security Council have intelligence support from the Office of National Estimates. In the later stage of the Korean War, casualties and heavy burdens caused serious dissatisfaction among the American people, and anti-war sentiment spread nationwide. At this time, Peng Dehuai's Jin Cheng Campaign eliminated 53,000 South Korean soldiers in just 15 days and recovered more than 160 square kilometers of positions. In this context, Eisenhower hoped to find effective methods to end this war honorably in the future. However, regarding whether to quickly increase troops or concede for peace, Eisenhower asked the intelligence assessment agency to make accurate assessments, analyzing in detail various aspects such as artillery shells, transportation, military supplies, and support from other countries, and concluded that it was impossible for the U.S. military to defeat the Chinese Volunteer Army on the Korean battlefield. Therefore, Eisenhower accepted this report and soon reached agreement with the Chinese government, signing the armistice agreement.

Additionally, another combination path under non-emergency events is: ~Emergency Events * Interest Proposition and Coordination * ~Experience Cognition * ~Expectation Cognition * ~Social Structure and Culture/Environment * ~Mental Set * Trust, with cases that can only be explained by this combination factor accounting for 21% of total cases. This path again verifies the interactive influence of two important factors—interest proposition and coordination and trust—in driving the adoption of national intelligence estimate reports. It is not difficult to find that in non-emergency events, decision-makers not only continue to rely on irrational decision-making factors such as trust but also

incorporate rational and procedural factors such as interest proposition and coordination into the decision-making framework for whether to adopt intelligence assessment reports.

Table 4 Combination Factor Analysis - Path 1 (Emergency): Emergency Events * Experience Cognition * Trust | Consistency = 0.91, Raw Coverage = 0.14, Unique Coverage = 0.14 - Path 2 (Non-Emergency): ~Emergency Events * Interest Proposition and Coordination * Expectation Cognition * Social Structure and Culture/Environment * ~Mental Set * Trust | Consistency = 0.88, Raw Coverage = 0.32, Unique Coverage = 0.32 - Path 3 (Non-Emergency): ~Emergency Events * Interest Proposition and Coordination * ~Experience Cognition * ~Expectation Cognition * ~Social Structure and Culture/Environment * ~Mental Set * Trust | Consistency = 0.85, Raw Coverage = 0.21, Unique Coverage = 0.21

Note: indicates core condition present; indicates peripheral condition present; indicates core condition absent; indicates peripheral condition absent

5 Conclusion and Discussion

This study aims to explore the factors influencing the adoption of national intelligence estimate reports, discover what strategic issues can be placed on the national intelligence estimate agenda, and ultimately be adopted by decision-makers. Based on multiple-streams theory and cognitive psychology theory, combined with the national intelligence estimate process, focusing on three aspects affecting the relationship between national intelligence estimates and decision-making—problem stream, policy stream, and political stream—this study constructs an influence mechanism model of national intelligence estimates and decision-making that includes seven variables: emergency events, interest proposition and coordination, cognitive factors (including experience cognition, expectation cognition, social structure and cultural environment), and psychological factors (including mental set and trust). Using 20 representative cases of U.S. and U.K. national intelligence estimates and employing qualitative comparative analysis, this study tests the above theoretical model. The results can provide references for improving China's national intelligence estimate system, enhancing the fit between assessment results and decision-making, and increasing assessment product utilization. However, we still need to re-examine these results within China's system. As President Xi Jinping pointed out, "We should learn from Western experience, but must never blindly copy it" [44].

On the one hand, according to the research results, in the decision-making process for emergency events, the adoption of national intelligence estimate reports is mainly influenced by irrational factors such as decision-makers' cognition and psychology, especially the subjective factor of trust. This indicates that the complexity and diversity of organizational structures inevitably involve irrational factors in the decision-making process. Therefore, we must fully recognize the irrational decision-support paths of national intelligence estimates beyond

rational factors and give full play to the superiority of the socialist system in improving the quality of the intelligence-decision relationship. Consequently, some scholars propose that intelligence agencies need to maintain distance from decision-makers [45-46]. Although distance ensures the objectivity of research results, it is not conducive to improving decision-makers' judgment of situations. Moreover, the irrelevance of intelligence products to decision-makers' concerns and non-compliance of product formats with decision-makers' requirements are also important reasons why intelligence is not used [46]. However, U.S. national intelligence estimate experience shows that if intelligence agencies have close relationships with decision-makers, they will inadvertently incorporate decision-makers' biases and go astray, even causing intelligence politicization. This phenomenon is mainly determined by the political systems of countries like the UK and U.S. For example, the seemingly "democratic" U.S. political system is actually ruled by a few elites, dominated by professional politicians and bureaucrats. The president tends to concentrate the decision-making process in the White House, forming "small circle" politics [47]. Meanwhile, lobbying activities by business groups in Congress lead to extreme narrow interests, seriously weakening the function of the representative system to express public interests. In such contexts, intelligence agencies should maintain appropriate distance from decision-makers to avoid becoming tools for decision-makers to seize interests.

On the other hand, according to the research results, the important role of interest proposition and coordination is highlighted in non-emergency situations, and this factor is the only necessary condition in the single-variable analysis for the adoption of national intelligence estimate reports. This indicates that decision-makers' adoption of assessment results still mainly depends on whether national intelligence estimate work has a sound production organization and process. Therefore, to continuously strengthen the quality of national intelligence estimate work and improve decision-support efficiency, we should continue to establish and improve a coordinated national intelligence estimate system. Specifically, we need to establish a core intelligence agency that can coordinate relationships between various intelligence assessment agencies and user agencies, which can connect with decision-makers above and coordinate various intelligence agencies' participation in drafting, discussing, and reviewing assessment issues below. Under the coordination of the core agency, various intelligence agencies can reduce departmental overlap, inefficiency, and vicious competition, utilize resources more rationally, and serve national decision-making more centrally. Because each intelligence agency represents its own interests and has its own responsibilities and division of labor in the national intelligence estimate process, national intelligence estimates produced under this mechanism can better coordinate the propositions of various interest subjects and reflect the understanding of the entire intelligence community. However, in emergency events, decision-makers rely more on the rational decision-making procedures of national intelligence estimates. Because under the rational model, decision-makers do not need to consider complex calculations but only need to follow established procedures to obtain results that can provide timely support for

decision-making. Therefore, when facing sudden events, the complex and cumbersome national intelligence estimate process should be appropriately streamlined. Based on the core concept of interest coordination, the assessment procedure can be simplified according to the urgency of the situation and the urgency of decision-makers' needs.

In contrast, China's political system has distinct advantages. Especially Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era runs through the people-centered value core, with all its internal organic aspects fully demonstrating our Party's value logic of standing in the people's position, upholding the supremacy of the people, and relying on the people's strength. In this context, our national intelligence estimate agencies have the confidence and obligation to move closer to decision-makers and maximize support for decision-makers. This means that assessment agencies must fully consider whether this analysis is helpful to decision-makers' policy agendas before undertaking any task. They should not only define users to excavate assessment issues but also pay attention to the roles users play in decision-making and simulate users' thinking processes. At the same time, they should conduct predictive assessments, be good at discovering existing opportunities, and analyze the weak links of opponents [48], while decision-makers should let national intelligence estimate agency personnel understand policy needs and provide timely policy guidance and direction to workers.

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