# Model of Influencing Factors for Member Selection in University Think Tank Alliances and Empirical Study: Postprint

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## Abstract

[Purpose/Significance] The establishment of cooperative alliances represents an emerging trend in the collaborative development of university think tanks. Member selection, as the primary phase in constructing university think tank alliances, holds significant implications for think tank cooperation and long-term sustainability. This study investigates the influencing factors of member selection for university think tank alliances in China, aiming to provide references for relevant theory and practice.

[Method/Process] An influencing factor model for member selection in university think tank alliances is constructed, and questionnaire surveys together with SPSS software are employed to test and empirically analyze the model.

[Results/Conclusion] When undertaking member selection, university think tank alliances should evaluate prospective members across five dimensions: social recognition, compatibility, resource advantages, capability performance, and collaborative cooperation status.

## Full Text

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# Model and Empirical Study on Influencing Factors of Member Selection for University Think Tank Alliances

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**Abstract:** [**Purpose/Significance**] Establishing cooperative alliances represents a new trend in the collaborative development of university think tanks. As the primary link in constructing university think tank alliances, member selection holds significant importance for think tank cooperation and long-term development. This study examines the influencing factors of member selection for university think tank alliances in China, aiming to provide reference for relevant theory and practice. [**Method/Process**] This paper constructs an influencing factors model for university think tank alliance member selection and employs questionnaire surveys and SPSS software to test and empirically analyze the model. [**Results/Conclusion**] When selecting members, university think tank alliances may consider five aspects: social recognition, compatibility, resource advantages, capability performance, and collaborative cooperation.

**Keywords:** university think tank; think tank alliance; university think tank alliance; member selection
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Think tanks, also known as Brain Trusts or Think Tanks, originated in Western countries in the 1930s as stable, relatively independent non-profit public policy research organizations with functions including policy advice, theoretical innovation, public opinion guidance, social services, and public diplomacy [1,2]. University think tanks possess rich academic resources, favorable research environments, and strong talent pools, giving them unique advantages in fulfilling think tank functions. Among the 837 think tanks indexed in the Chinese Think Tank Index (CTTI), university think tanks account for 67%, making them the most prominent type of think tank in China [3]. In February 2014, the Ministry of Education explicitly proposed promoting cooperation between university think tanks and other entities to build a collaborative development mechanism featuring strong alliances and complementary advantages [4], making alliance formation a new model for advancing university think tanks.

In recent years, university think tanks have flourished in China, yet phenomena such as scattered resources, duplicate research, fragmented operations, and limited policy influence have hindered their further development. Under these circumstances, establishing long-term stable cooperative relationships and developing university think tank alliances has become essential. Such alliances can fully integrate human, financial, and information resources across think tanks, leverage complementary strengths, unleash synergistic innovation vitality, and give full play to the role of think tanks in gathering intelligence and talent, thereby

improving policy consultation quality. China's university think tank alliances are currently in an exploratory development stage. Although some successful cooperation cases have emerged, relevant theoretical research remains insufficient, with even scarcer studies addressing member selection issues. In practice, most university think tank alliances are initiated under the guidance of competent authorities, with one or multiple university think tanks spontaneously forming alliances based on shared needs. While this project-based cooperation enables short-term research collaboration across multiple institutions and fields, long-term challenges persist, including weakened cooperation following project termination, nominal existence due to poor management, low policy adoption rates, and inadequate talent and capital flow. Scientific member selection and matching by alliance initiators and competent authorities according to their development needs better facilitate stable alliance relationships and enhanced cooperation outcomes.

Focusing on the member selection issue for university think tank alliances and grounded in relevant theories and domestic/international think tank practices, this study aims to explore the influencing factors that university think tank alliances should consider during member selection and to test the theoretical model through empirical methods, hoping to supplement relevant theoretical research and provide methodological references for practice.

## 1 Literature Review

China's university think tank construction started relatively late, with its initial period roughly from the late 20th century to the early 21st century, exemplified by institutions such as Fudan University's China Center for Economic Research and Peking University's Institute of International Strategic Studies [5]. After nearly two decades of development, university think tank construction has shown prosperous growth, attracting widespread attention and discussion in relevant fields.

University think tanks serve as bridges connecting "government-university-society" [6]. Though affiliated with universities, they maintain relative independence [7]. While developing vigorously, university think tanks also face problems and challenges. Li Gang pointed out that most Chinese university think tank construction is primarily driven by projects, resources, and branding, with insufficient policy input, academic-oriented evaluation mechanisms, and inadequate managerial awareness and knowledge reserves, causing think tank governance to fall into a "sandwich bottleneck" [8]. Shen Guolin proposed that China's university think tank knowledge production exhibits closure, with limited support from academic circles, academic pressures detaching teachers from social practice, poor researcher mobility, and inherent university institutional mechanisms restricting think tank operations [9]. Lu Xiaobin argued that differences in think tank types and research fields have bottlenecked the construction of think tank evaluation systems, making unified and large-scale evaluation difficult [10].

Addressing these issues in university think tank development, an increasing number of scholars have advocated for think tank alliance establishment under collaborative development environments. Chu Jingli argued that university think tanks should enhance cooperation and exchange through alliance formation to improve research efficiency and avoid duplicate research [11]. Zhang Xuehong proposed that constructing regional think tank alliances across universities and disciplines could make resource acquisition, output, and sharing more efficient [12]. Huang Changwei, using Harbin Commercial University Library's think tank platform as an example, elaborated on four models of university library participation in think tank construction and proposed accelerating regional university think tank alliance construction with complementary advantages [13]. Sun Ruiying analyzed potential problems and inevitabilities of university think tank alliances under non-incentive conditions and proposed incentive paths of "joint construction and sharing, internal cohesion and external linkage" from a game theory perspective [14]. Chen Haibei analyzed university think tank alliance mechanisms and benefit distribution mechanisms based on actor-network theory and the Shapley value model, providing references for further improving alliance operation mechanisms [15-16].

Regarding alliance member selection, Liu Jiexian and Zhang Wei established virtual alliance member selection models using discrete algorithms and genetic algorithms [17-18]. Si Li proposed member selection methods for research data repository alliances from the perspectives of resource and capability complementarity, alliance compatibility, and enthusiasm for joining and sharing [19]. Li Shanshan argued that library alliances should absorb different types of member libraries to meet diverse user information service needs [20]. Yuan Jing, through empirical investigation of China's library alliances, identified funding issues, equivalence of responsibilities and rights, standardized systems, and cooperation enthusiasm as primary factors determining alliance success [21]. Some scholars have also explored member matching issues for university think tank alliances from the perspective of service capabilities [22].

Literature review reveals that current research on university think tank alliances primarily focuses on construction status, institutional models, existing problems, and think tank evaluation. Many scholars propose that forming think tank alliances can enhance collaborative development, but few studies specifically address member selection issues for university think tank alliances.

## 2 Basic Principles for University Think Tank Alliance Construction

University think tank researchers typically hold dual functions of teaching/research and policy consultation, with the former often occupying significant time and energy. Therefore, compared with short-term emergency research by official think tanks, university think tanks possess strong basic research capabilities and talent advantages, making them more adept at long-term trend, forward-looking, and strategic research [23]. Establishing alliances

can further improve collaborative efficiency and service quality, helping to leverage the alliance's role in gathering intelligence and talent. Thus, when forming university think tank alliances, it is essential to combine university research characteristics, clarify basic principles, and provide solutions and directional guidance for member selection.

### 2.1 Clarity and Balance

Clarity and balance are fundamental principles for maintaining alliance vitality. First, university think tank alliances should identify their positioning and clarify development directions [24], conducting overall planning on core functions, research fields, and cooperation scope to achieve top-level design. Additionally, alliances should macroscopically balance overall levels among members, preventing gaps in scale, resources, and capabilities that could weaken cooperation enthusiasm and foster free-riding mentalities among less powerful think tanks [25].

### 2.2 Professionalism and Innovation

Professionalism and innovation are essential principles for enhancing alliance strength. University think tank alliances should provide higher-quality, more effective policy consultation services than individual think tanks, imposing higher professionalism requirements manifested in advantageous disciplines, high-quality outputs, professional leadership talent teams, and specialized research techniques and methods [26]. Additionally, with increasing repetitive and homogeneous research, innovation capability is crucial for developing independent research outcomes and stimulating think tank vitality [27].

### 2.3 Diversity and Pluralism

Diversity and pluralism are internal drivers for enhancing alliance activity. Current service demands facing think tanks exhibit cross-regional, cross-disciplinary, and cross-institutional characteristics, with many complex major research topics requiring more systematic and comprehensive solutions [28]. In a competitive environment with serious homogenization, university think tank alliances should leverage collaborative opportunities to step out of their comfort zones, improve openness and inclusiveness, actively absorb various regional, thematic, and specialized think tanks for collaborative development, fully leveraging members' advantages in resources, talent, and capabilities while respecting differences and pursuing pluralistic development [29].

### 2.4 Independence and Objectivity

Independence and objectivity are the soul of think tank alliance services. Losing independence and objectivity would significantly diminish think tanks' policy advisory role [30]. China's university think tanks have long been under government control, with research work constrained by government-commissioned and

bidding projects, easily leading to loss of independence in personnel, financial, and management authority [31]. Think tank alliances should utilize collective strength to reduce dependence on government, political parties, and commercial interests, enhancing intellectual independence and research objectivity through diversified funding sources and management system reforms to produce high-quality policy advice.

## 3 Influencing Factors Model for University Think Tank Alliance Member Selection

### 3.1 Theoretical Foundation for Model Construction

Domestic and international scholars have conducted extensive theoretical research on strategic alliance partnership establishment and selection, including resource dependence theory, alliance process theory, game theory, transaction cost theory, relational contract theory, collaborative dynamic models, and social structure theory [32-35]. These theories provide strong support for inter-enterprise cooperation, but theoretical research on university alliance cooperation is relatively scarce. Universities and enterprises differ significantly in institutional attributes, goal orientation, and operation models. Enterprises are profit-oriented socioeconomic organizations providing products or services to markets, while universities typically feature non-profit, academic, and public welfare characteristics, with teaching, research, and social service as the three universally recognized basic functions. Therefore, when discussing university think tank alliance member selection, we cannot directly copy enterprise alliance research findings but must select research methods compatible with university think tank alliance construction.

The "3C" principle serves as an important basis for alliance partner selection and has been widely validated by strategic alliance managers through over 20 years of practice. The "3C" principle refers to compatibility, resources and capabilities, and commitment. Compatibility denotes the matching degree and consistency between alliance partners in strategic goals, organizational structure, cooperation approaches, and scale capabilities. Resources and capabilities include the resource advantages and capability levels possessed by potential alliance partners for mutual support and complementarity. Commitment primarily manifests as subjective awareness or cooperation motivation to share responsibilities and obligations [36]. In university think tank alliance member selection, the "3C" principle can be expressed as: the compatibility and matching degree between members and the alliance in goal orientation, research fields, and scale strength; necessary resources and capabilities in academic research, decision support, and practical innovation; and members' subjective awareness or motivation to assume responsibilities and obligations, corresponding to compatibility dimension, resource dimension, capability dimension, and subjective awareness dimension.

The "3C" principle also finds application in domestic and international think

tank construction theory and practice. The Consortium for Policy Research in Education (CPRE), established by seven top U.S. universities including Harvard, Stanford, and the University of Pennsylvania, represents a university education think tank community where many renowned educators and psychologists regard self-value realization and responsibility and identity toward scientific endeavors as consistent spiritual pursuits, emphasizing guidance and cultivation of values and subjective awareness [37]. D. E. Abelson believes that think tanks' mission orientation, development strategies, funding, and human resources play key roles in political systems and idea dissemination [38]. When recruiting member units, the Henan University Think Tank Alliance explains the alliance's nature, functional positioning, and business scope, and proposes clear requirements regarding alliance conventions, social evaluation, human and material resources, and academic capabilities [39].

The Global Go To Think Tank Index Report by the University of Pennsylvania, the China Think Tank Report by the Shanghai Academy of Social Sciences, and the Global Think Tank Evaluation Research Report by the Chinese Academy of Social Sciences Evaluation Institute represent the three most influential think tank evaluation systems domestically and internationally. Compatibility, subjective awareness, resources, and capabilities are all reflected in these three evaluation mechanisms, as shown in Table 1 .

**Table 1** Evaluation Indicator System Structure of Three Representative Think Tank Evaluation Reports [40-42]

Additionally, influence serves as an important factor in think tank and think tank alliance practice both domestically and internationally. All three evaluation systems include influence as a key indicator. Top-tier U.S. think tanks like the Brookings Institution have consistently regarded "quality, independence, and impact" as core think tank values, repeatedly ranking at the top of the Global Go To Think Tank Index [43]. The Belfer Center for Science and International Affairs at Harvard University, the Hoover Institution at Stanford University, and the James A. Baker III Institute for Public Policy at Rice University have all established dedicated think tank voice channels to enhance influence on policymakers and public policy [44]. Collaborative cooperation between think tank alliances and external parties not only reflects the alliance's original meaning of "collaborative innovation, joint construction and sharing" but also constitutes an important pathway for enhancing alliance influence. Therefore, while inheriting the four indicators of "compatibility, resources, capabilities, and subjective awareness" from the "3C" principle, this study purposefully introduces the "collaborative cooperation" indicator based on the purpose of think tank alliance construction and relevant think tank theory and practice. These five dimensions constitute the theoretical foundation for the influencing factors model of university think tank alliance member selection, as shown in Table 2 .

**Table 2** Theoretical Dimensions of Influencing Factors for University Think Tank Alliance Member Selection

### 3.2 Conceptual Model of Influencing Factors for University Think Tank Alliance Member Selection

Based on the five theoretical dimensions of influencing factors for university think tank alliance member selection, a conceptual model is constructed.

**3.2.1 Subjective Awareness Dimension** At the subjective awareness level, think tank alliance partner selection can consider both external evaluation and internal perspectives. First, from an external evaluation standpoint, think tank visibility, reputation, and branding construction can reflect social influence and recognition from the side. Think tanks that rank on authoritative domestic and international think tank lists and receive broad social recognition often possess substantial resources, capabilities, and comprehensive strength. Establishing cooperative relationships with such think tanks better enhances the alliance's influence and credibility [45]. Second, whether alliance members have clear cooperation intentions relates to mutual trust and relationship stability. Generally, think tank teams with responsibility awareness and scientific spirit are more willing to consciously assume alliance responsibilities and obligations [46]. In summary, cooperation intention, responsibility awareness, and social recognition are conceptual influencing factors in the subjective awareness dimension.

**3.2.2 Compatibility Dimension** Compatibility primarily means fully considering the matching and compatibility degree between think tanks and the alliance during member selection, effectively avoiding phenomena such as imbalanced cooperative relationships and decreased enthusiasm caused by excessive gaps between think tanks. This includes two aspects: basic attributes and goal orientation matching. Basic attributes refer to basic information reflecting the overall development process and current status of think tanks, such as establishment background, overall scale, geographical distribution, organizational structure, and institutional construction. Additionally, it is necessary to grasp think tanks' goal orientation and development direction. Current national major research fields and medium- to long-term research topics exhibit long-term, complex, and interdisciplinary characteristics. Clarifying university think tanks' development goals and directions facilitates overall alliance planning and deep integration, allowing full play to respective professional cooperation advantages [47]. In summary, basic information and goal orientation serve as compatibility dimension variables for think tank alliance member selection.

**3.2.3 Resource Dimension** According to resource existence forms, university think tank resources can be divided into material resources and intellectual resources. Required material resource conditions for university think tank construction mainly include funding level and sources, research infrastructure and environment, think tank platform and website construction, and database construction [48,49]. Intellectual resource construction primarily revolves around people as creators of tacit knowledge, requiring understanding of talent team construction and talent structure. For example, the Nanjing University Zijin

Media Think Tank employs over a dozen influential renowned professors as star researchers, forming a "star professor research group," with project funds raised exceeding government appropriations [50]. This high degree of independence can avoid excessive interference from power departments, making research decisions more objective. In summary, this study divides resource variables influencing university think tank alliance member selection into intellectual resources, funding conditions, and infrastructure/environment construction.

**3.2.4 Capability Dimension** Capability performance constitutes an important standard for measuring university think tank comprehensive strength. Regarding output, the quantity and quality of scientific research outputs such as papers, works, patents, and reports serve as the most intuitive judgment criteria for academic research and are certainly important. However, equal attention should be paid to the transformation and application of think tank outputs, as research capability should not be the sole criterion for evaluating university think tank performance [51]. Organizational management serves as the backing force for stable think tank operation. Scientific and reasonable management systems can stimulate researcher enthusiasm and organizational vitality, providing support for think tank research and consultation [52]. Additionally, university think tank construction must keep pace with information technology development, mastering advanced science and technology and methods to promote think tank technological innovation, especially possessing core technologies and innovation capabilities in key fields [53]. In summary, this study identifies output, organizational management, and technical methods as capability-level influencing factors.

**3.2.5 Collaborative Cooperation Dimension** China's university think tanks hold absolute advantages in quantity but lack collaborative cooperation awareness and capabilities, with phenomena such as numerous think tank institutions, scattered and repetitive research topics, and wasted research resources. To address this problem, collaborative cooperation situations with different types of entities should be analyzed when selecting think tank partners. First, university think tanks can actively cooperate with other think tanks, including not only university think tanks but also party/government/military think tanks, social think tanks, and enterprise think tanks. Establishing good cooperative relationships and gaining recognition from various think tanks represents important alliance performance [54]. University think tanks assist governments in policy research and provide decision-making consultation for enterprises. Government and enterprise evaluations of university think tanks serve as indispensable elements when screening alliance members [55]. University think tanks also play important roles in public opinion guidance, needing to actively broaden information dissemination channels, utilize multimedia platforms to promote think tank ideas, understand and listen to public voices, and guide correct social 舆论. Therefore, coordination between university think tanks and social media also constitutes an important factor in alliance member selection

[56]. Finally, to enhance discourse power and international influence, university think tanks must strengthen international cooperation, learn from outstanding foreign think tank cases, and promote domestic think tank products and services globally [57]. In summary, this study summarizes the collaborative cooperation dimension influencing university think tank alliance member selection into four aspects: peer think tank collaboration, government-enterprise collaboration, social media collaboration, and international think tank collaboration.

**3.3 Research Hypotheses** The 15 concepts under the five dimensions serve as model variables for university think tank alliance member selection, with corresponding 15 model hypotheses proposed. All variables are hypothesized to be positively correlated with university think tank alliance member selection behavior, as shown in Table 3 .

**Table 3** Summary of Model Hypotheses

**Figure 1** [**Figure 1: see original paper**] Conceptual Model of Influencing Factors for University Think Tank Alliance Member Selection

## 4 Empirical Analysis of the Influencing Factors Model for University Think Tank Alliance Member Selection

### 4.1 Questionnaire Design, Distribution, and Recovery

To ensure scientific and rigorous survey results, this study targeted university think tanks nationwide, supplemented by academy of social sciences think tanks and party/government/military think tanks, distributing questionnaires to think tank research experts and scholars. Figure 2 [Figure 2: see original paper] displays survey participants' institutional nature, industry field, and geographical distribution.

**Figure 2** [**Figure 2: see original paper**] Word Cloud of Sample Participants

This study designed questionnaires using an online platform and distributed them via email and WeChat sharing. The questionnaire comprised five modules: subjective awareness, compatibility, resources, output and capabilities, and collaborative cooperation, with 42 measurement indicators across 13 question items. A five-point Likert scale measured importance levels as "completely unimportant, relatively unimportant, moderately important, relatively important, and very important," corresponding to 1-5 points. Quality control questions required respondents to confirm direct experience in think tank cooperation or alliance research/operation to ensure data authority and reliability. The final section included open-ended questions soliciting suggestions for the study as supplementary items. To ensure rational questionnaire design, a pilot survey was conducted before formal distribution. After small-scale testing, SPSS was used for preliminary data examination, and expert suggestions were incorporated to adjust questionnaire structure, content, and item settings, forming the final version.

The questionnaire was distributed from March 10 to April 3, 2020 (24 days). A total of 455 questionnaires were distributed, with 151 returned. After screening, 126 valid questionnaires were retained, yielding an 83.44% valid response rate. Invalid questionnaires primarily resulted from omissions, misselections, and duplicate submissions. Concurrently, expert interviews were conducted via email and telephone with 20 experts to discuss influencing factors for member selection, using open-ended questions without subjective guidance. Core semantics from interview content were extracted and classified, with results shown in Table 4 .

**Table 4** Semantic Analysis of Expert Interviews

The results indicate that expert suggestions are basically encompassed within the influencing factors model and questionnaire design, preliminarily validating the model's comprehensiveness and rationality.

**Figure 3** [**Figure 3: see original paper**] Geographical Distribution of Samples

### 4.2 Descriptive Statistical Analysis

Among the 126 valid questionnaires, 83 respondents were male and 43 female (approximately 2:1 ratio). Age primarily ranged from 36-45 years, with the highest education level being PhD. Teachers and researchers accounted for about 80% of respondents, indicating high educational attainment. Respondents came from 19 provinces/municipalities nationwide, with Beijing, Jiangsu, and Hubei ranking top three (see Figure 3). These regions lead China in think tank research activity, making surveys more authoritative. Analysis shows the survey data are generally reasonable and reliable, meeting quality requirements.

In variable descriptive analysis, all item means exceeded 3, indicating respondents generally accepted the item design and believed all indicators influenced the research. Nearly all standard deviations floated within 1, showing small data volatility and stable distribution. Kurtosis and skewness coefficients are important numerical characteristics describing data distribution, primarily used to judge normality [58]. When absolute skewness is less than 3 and absolute kurtosis is less than 10, data basically follow normal distribution [59]. All data met these criteria, indicating the recovered data were suitable for subsequent reliability and validity analysis. Detailed results appear in Table 5 .

**Table 5** Descriptive Statistical Results of Variables

### 4.3 Reliability and Validity Analysis

Reliability analysis examines data stability and consistency. Cronbach's $\alpha$ coefficient was used for reliability testing. Coefficients >0.7 indicate good scale reliability. Table 6 shows overall reliability reached above 0.9, demonstrating excellent measurement data reliability and credibility.

**Table 6** Overall Reliability Coefficient

Validity analysis examines whether item design is reasonable, typically using construct validity. The KMO value tests data suitability for factor analysis, generally requiring >0.5; Bartlett's sphericity test p-value should be <0.005. Overall scale and dimension-level KMO values and Bartlett's test results appear in Tables 7 and 8 .

**Table 7** KMO and Bartlett's Test for Overall Scale

**Table 8** KMO Values and Bartlett's Test by Dimension

The overall KMO value was 0.83 (>0.5), with Bartlett's test approximating $^{2}$ = 3237.363, df = 861, p = 0.000 (<0.001), meeting factor analysis requirements and indicating data suitability. All dimensions had KMO values >0.5 and p-values of 0.000 (<0.001), showing reasonable questionnaire structure and good construct validity.

### 4.4 Correlation and Regression Analysis

Correlation analysis examines relationships and their strength between data, generally preceding regression analysis as a prerequisite. Pearson correlation coefficients measured relationships between university think tank alliance member selection and variables. The correlation coefficient r ranges from 0-1, with larger values indicating stronger relationships. Since some dimensions contained too few items for variable-level validity testing, integration yielded nine variables: subjective awareness, compatibility, intellectual resources, funding and environmental facilities, output, management and technology, peer-government collaboration, social media collaboration, and international think tank collaboration. Results appear in Table 9 .

**Table 9** Correlation Coefficient Statistics

Member selection showed significant positive correlations with all nine variables: cooperation intention (0.409), compatibility (0.678), intellectual resources (0.847), funding/environmental facilities (0.745), output (0.805), management/technology (0.780), peer-government collaboration (0.797), social media collaboration (0.686), and international think tank collaboration (0.845), preliminarily validating the hypothesized model.

While correlation analysis explains relationships, regression analysis examines impact relationships, determining variable directions and testing causal relationships between independent and dependent variables. Regression analysis results for each dimension appear in Tables 10 through 14 .

**Table 10** Regression Analysis of Subjective Awareness Variables on Member Selection

**Table 11** Regression Analysis of Compatibility Variables on Member Selection

**Table 12** Regression Analysis of Resource Variables on Member Selection

**Table 13** Regression Analysis of Capability Variables on Member Selection

**Table 14** Regression Analysis of Collaborative Cooperation Variables on Member Selection

All variables were significant at the 1% confidence level, indicating positive impact relationships. VIF values <5 showed no multicollinearity; positive regression coefficients and DW values between 1.7-2.3 indicated no autocorrelation. However, cooperation intention and responsibility awareness explained only 3.5% and 2.5% of variance respectively—too low for adequate explanatory power and significance. Therefore, hypotheses H1 and H2 failed validation.

### 4.5 Hypothesis Model Revision

Based on empirical results, hypotheses H1 and H2 corresponding to cooperation intention and responsibility awareness factors under the subjective awareness dimension did not pass validity analysis, as their influence on member selection was weak. However, their total mean scores were 4.556 and 4.5 respectively, indicating high average recognition. Item design and sample size also affect data. Therefore, in practice, social recognition can serve as the primary 考察 factor, with cooperation intention and responsibility awareness as supplementary factors.

**Table 15** Summary of Hypothesis Validation Results

**Figure 4** [**Figure 4: see original paper**] Revised Conceptual Model of Influencing Factors for University Think Tank Alliance Member Selection

## 5 Discussion

The empirical results indicate that when conducting member selection and establishing cooperative relationships, university think tank alliances can primarily consider social recognition, compatibility, resource advantages, capability performance, and collaborative cooperation. Among these, intellectual resources explain over 70% of variance in member selection, indicating talent team construction is a crucial cooperation consideration. The denser the talent resources and the more high-end talent, the easier to attract cooperative relationships. The independence, impartiality, and authority of research outcomes are closely related to funding independence; think tanks with diversified, stable, and adequate funding sources are less susceptible to government dependency, thus achieving objective policy consultation. Good team collaboration atmosphere and quality research infrastructure provide material support for researchers. Therefore, infrastructure and environment must meet alliance development requirements. In summary, talent, funding, and infrastructure constitute important supporting forces for think tank knowledge production and cooperative development.

Think tank capability levels manifest primarily in output, organizational management, and technical method application. The empirical study confirms these

three factors positively influence member selection, with output showing the greatest explanatory power, indicating experts focus most on think tank output. Additionally, think tanks must optimize organizational structure and management models, as many have imperfect systems for operation mechanisms, personnel management, incentives, and promotion, hindering long-term development. Finally, key core technologies and independent innovation capabilities are important weapons for maintaining advantages and highly competitive factors for attracting cooperation. Alliance members can promote research and technological advancement in core fields through learning and exchange.

The collaborative cooperation dimension primarily refers to exchanges with peer think tanks, government enterprises, social media, and international partners. Research results show all four variables under this dimension significantly and positively influence member selection, indicating cooperation status and influence are important references. Actively collaborating think tank institutions possess broader social resources and communication advantages, facilitating interconnected cooperation models. Additionally, highly active institutions generate greater think tank influence, benefiting overall alliance influence and attention for widely disseminating think tank ideas.

The compatibility dimension includes basic attribute information and goal orientation variables, with related hypotheses all validated. Regression analysis shows basic attribute information explains 37.2% of variance, with both attributes and goal orientation significantly and positively influencing member selection. This indicates that to ensure cooperation efficiency and compatibility, understanding development background and current status is necessary. Fully comprehending research fields, team structure, and development goals during member selection and recommendation can improve matching and compatibility, ensuring consistent cooperation purposes and goals while enhancing alliance inclusiveness through cross-disciplinary cooperation for cross-regional and cross-field research, aligning with basic alliance construction principles.

In summary, social recognition, basic attribute information, goal orientation, intellectual resources, funding resources, infrastructure and environment, output, organizational management capability, technical methods, peer think tank collaboration, government-enterprise collaboration, social media collaboration, and international think tank collaboration can serve as primary considerations for university think tank alliance member selection. Cooperation intention and responsibility awareness have weaker influence but remain relevant as additional factors for comprehensive consideration.

Promoting cooperative alliance relationships among university think tanks is crucial for developing new-type think tanks with Chinese characteristics. This study deeply explored member selection issues, proposed five influencing dimensions, and validated them through empirical research. The conclusions can provide theoretical guidance for member selection during initial alliance construction. However, several limitations exist: (1) The study is based on university think tank construction status and principles, analyzing from the

university think tank perspective with university researchers as primary survey targets. Thus, conclusions mainly guide university think tank alliance member selection, with applicability to other alliances requiring further validation. (2) The model needs further improvement. Future research can employ different theories and methods to enhance scientific rigor and reliability. (3) The empirical sample scope is limited. To control sample quality, respondents were restricted to researchers directly involved in think tank or alliance construction, resulting in insufficient sample size. Expert interviews were added for support, but future research should expand sample scope or combine grounded theory methods for greater reliability. Finally, member selection is only the first step toward effective alliance operation; subsequent research will address collaborative cooperation and operation models.

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## Model and Empirical Study on Influencing Factors of Member Selection for University Think Tank Alliance

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**Abstract:** [Purpose/significance] The establishment of cooperative alliances is a new trend for the collaborative development of university think tanks. As the primary link in constructing university think tank alliances, member selection is of great significance to think tank cooperation and long-term development. This study examines the influencing factors of member selection for university think tank alliances in China, aiming to provide reference for relevant theory and practice. [Method/process] This paper constructs an influencing factors model for university think tank alliance member selection and employs questionnaire surveys and SPSS software to test and empirically analyze the model. [Result/conclusion] When selecting members, university think tank alliances may consider five aspects: social recognition, compatibility, resource advantages, capability performance, and collaborative cooperation.

**Keywords:** university think tank; think tank alliance; university think tank alliance; member selection

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