A Study on Evaluation Theory and Framework System for New-Type Think Tanks (Postprint)

Authors: Liu Deng, Zhao Chaoyang, Junfeng Wei, Lu Shengjun, Qi Zhuoli

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Abstract

[Purpose/Significance] Think tank evaluation serves as a guide and driver for the construction and development of think tanks, and the scientific conduct of think tank evaluation work is of great significance. [Method/Process] Based on research and analysis of evaluation theory and advances in think tank evaluation studies, this paper constructs a theoretical framework system for think tank evaluation grounded in fourth-generation evaluation theory. Furthermore, it constructs an ontology model, a pluralistic value system, and an evaluation indicator framework for new-type think tanks, among other components. [Results/Conclusion] This paper provides systematic theoretical exploration for think tank evaluation practice and lays a foundation for subsequent work.

Full Text

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Liu Deng; Zhao Chaoyang; Wei Junfeng; Lu Shengjun; Qi Zhuoli
China National Defense Science and Technology Information Center, Beijing 100142

Abstract

[Purpose/Significance] Think tank evaluation plays a guiding and promoting role in the development of think tanks, and scientifically conducting think tank evaluation is of great significance. **[Method/Process]** Based on an analysis of evaluation theories and the progress of think tank evaluation, this paper constructs a theoretical framework system for think tank evaluation grounded in fourth-generation evaluation theory. Simultaneously, it builds an ontology model, a multi-value system, and an evaluation index framework for new-type

think tanks. [**Result/Conclusion**] This paper provides a systematic theoretical exploration for think tank evaluation practice and lays a foundation for subsequent work.

Keywords: new-type think tank; evaluation theory; evaluation framework system
Classification Number: C931.2

Think tanks have matured and exerted significant influence in Western society. Following the issuance of the "Opinion on Strengthening the Construction of New-Type Think Tanks with Chinese Characteristics"[1] (hereinafter referred to as the "Opinion") by the General Office of the Communist Party of China Central Committee and the General Office of the State Council, the construction and development of various think tanks in China have entered a vibrant new stage. Scientifically conducting think tank evaluation constitutes an important component of new-type think tank construction and management. Currently, academic circles at home and abroad are actively exploring think tank development and its value judgment, producing evaluation outcomes such as think tank influence and competitiveness. Overall, think tank evaluation still requires systematic and in-depth theoretical exploration to continuously optimize the theoretical framework system, promote the scientific and healthy development of think tank evaluation, and enhance its guiding and driving role in think tank development.

Before proceeding with this study, it is necessary to clarify the conceptual connotations of "evaluation" (评估) and "assessment" (评价). Currently, there is widespread mixed usage of the two terms "think tank evaluation" (智库评估) and "think tank assessment" (智库评价). Through research on the origins of introducing "evaluation," "assessment," and "appraisal" from the West and their Chinese translation differences [2], this paper argues that there is no essential distinction between evaluation and assessment, only differences in usage conventions. Both terms refer to the activity of appraising and judging things and their values, encompassing rich implications such as value assessment, integration of qualitative and quantitative aspects, and attention to both process and conclusions. However, in usage conventions, assessment tends to focus on the evaluation of specific value points, while evaluation emphasizes the judgment of potential and comprehensive values. For appraising the comprehensive value and development potential of think tank institutions, "think tank evaluation" is appropriate; for evaluating specific value indicators of think tanks, "assessment" is suitable, such as in "think tank network influence assessment."

This paper defines think tank evaluation as a constructive process in which the evaluating subject follows standardized evaluation procedures, employs reasonable evaluation standards and frameworks, and applies professional evaluation methods to judge and appraise the value of think tanks and their value realization processes [3]. This definition focuses on the purposes of think tank development, construction, and management, and uses the term "think tank evaluation" —which possesses both certificatory and developmental characteristics—to align

with the realities of new-type think tank construction and management in China.

2.1 Brief History of Evaluation Theory Development

To date, evaluation theory has undergone four generations of development [4][5][6][7]: The first generation primarily involved the application of measurement theory and techniques based on the positivist paradigm of social metrics (1930s). The second generation represented Tyler' s model of goal-described evaluation (1930s-1950s). The third generation was judgment-oriented evaluation emphasizing analysis (1950s-1970s). The fourth generation, marked by the monograph "Fourth Generation Evaluation" by American scholars Egon G. Guba and Yvonna S. Lincoln (emerging in the 1980s), is characterized by collaborative construction, full participation, and value pluralism.

The first three generations of evaluation theory all followed the positivist paradigm [8], viewing evaluation as the measurement and judgment of a single objective reality of the evaluated object, continuously refined and improved. However, they suffered from managerialist tendencies, neglect of value pluralism, and over-reliance on scientific positivism [4]. Fourth-generation evaluation theory follows the constructivist paradigm, acknowledging value pluralism and viewing evaluation not as measurement and judgment of objective reality, but as a process of communication and negotiation among various stakeholder groups to achieve co-construction of values. Fourth-generation evaluation theory challenges and subverts traditional evaluation theories at the philosophical levels of ontology, epistemology, and methodology. This fundamental paradigm shift constitutes what Kuhn termed a "paradigm revolution" [5], advancing people' s understanding of the scientific meaning of evaluation.

Although these evaluation theories primarily emerged and developed in educational assessment, their fundamental theories offer universal guidance for research fields involving "value judgment." This paper argues that the four generations of evaluation theory, especially the fourth generation, provide important guidance for conducting think tank evaluation: focusing more on developmental evaluation of think tanks, where the goal is improvement rather than merely demonstrating influence; emphasizing the process of multi-value reconstruction rather than static evaluation data; exploring strategies and methods for value realization and discovering internal development patterns rather than focusing solely on positivist methods; collecting data extensively from think tanks, policy stakeholders, and experts while inviting equal participation in judgment rather than expert dominance; and paying greater attention to sociological factors such as human nature and relationships inherent in think tanks as idea banks, rather than relying solely on evaluation techniques.

2.2 Analysis of Think Tank Evaluation Development

In recent years, six major institutions have been engaged in think tank evaluation research and publishing results [9][10][11][12]: The University of Pennsylva-

nia (“Penn”) has released nine “Global Go To Think Tank Index Reports” since 2006; the Center for Think Tank Studies at the Shanghai Academy of Social Sciences (“Shanghai Academy”) has released three “China Think Tank Reports” since 2014; the Chinese Academy of Social Sciences’ Social Sciences Evaluation Center (“CASS”) first released the “Global Think Tank Evaluation Report” in 2015; the China Think Tank Research Center released one “China Think Tank Influence Report” in 2015; the Horizon Research Consultancy Group’ s International Development Institute released one “China Think Tank Influence Report” in 2015; and the Center for Think Tank Studies and Evaluation at Nanjing University released its first “China Think Tank Network Influence Assessment Report” in 2016. Additionally, scholars such as Wang Lili, Sun Zhiru, and Zhu Xufeng [13][14] have conducted research on think tank influence and evaluation models.

Comprehensive analysis shows that these studies represent beneficial practices with considerable influence. Domestic scholars including Chen Yuanyuan [14], Cui Yujun [15], and Tang Guoyuan [16], as well as institutions such as CASS [11] and the Shanghai Academy [12], have provided reviews and comparative analyses of these evaluation studies, which will not be reiterated here.

This paper identifies six major problems in these think tank evaluation studies: First, singular evaluation purposes, focusing mainly on influence as a representational and outcome factor while neglecting foundational capabilities, construction processes, and internal factors—essentially seeing only “the tip of the iceberg.” Second, lack of systematic theory, particularly in understanding the think tank ontology and value discovery, neglecting research on evaluation value discovery. Third, incomplete understanding of evaluation objects and values; for instance, the Shanghai Academy’ s evaluation captures only the core value of influence without analyzing the multi-value system of the think tank ontology. Fourth, loopholes and contradictions in indicator systems; for example, Penn’ s utility indicators somewhat overlap with influence indicators, and the Shanghai Academy’ s “think tank growth capacity” strictly speaking does not belong to the influence category. Fifth, unscientific evaluation methods; Penn’ s McGann uses subjective overall impression evaluation without covering all stakeholders, while the Shanghai Academy employs subjective “nomination + selection + ranking” methods with insufficient objective evaluation. Sixth, inappropriate application of evaluation results. The current “ranking fever” emphasizes utility evaluation like influence while weakening comprehensive development assessment, making blind hype of rankings or using them to guide overall construction inappropriate.

3.1 Think Tank Evaluation Framework Approach

Think tank evaluation represents specific evaluation practice in the think tank domain. It should integrate the strengths of all evaluation theory generations, emphasizing the essence of fourth-generation evaluation’ s ontology, epistemology, and methodology—value pluralism and co-construction. The core is to balance relationships between evaluation subject and object, internal and external

aspects, qualitative and quantitative approaches, and certificatory and developmental purposes, exploring a theoretical framework encompassing ontology models, value discovery, indicator systems, methods, and result utilization.

The theoretical framework system for new-type think tank evaluation should cover: scientifically and comprehensively defining the think tank ontology, correctly discovering its multi-values, establishing an evaluation indicator framework around these values, building the indicator system by analyzing value realization processes, employing qualitative and quantitative methods to organize stakeholder participation in value negotiation and co-construction, and scientifically analyzing and applying evaluation results. This framework comprehensively answers fundamental elements: who to evaluate (understanding the evaluation object), what to evaluate (value discovery and definition), who evaluates (defining stakeholders as evaluation subjects), how to evaluate (evaluation criteria—establishing multi-values and analyzing value realization), evaluation credibility (methods for obtaining and processing value-carrier information), and how to use results (clear and accurate expression of evaluation purposes). As shown in Figure 1 [Figure 1: see original paper], this framework is an interconnected organic whole that can guide both single-perspective and comprehensive think tank evaluations.

In short, no "solely objective" measurement or judgment exists in think tank evaluation. Its essence lies in achieving organic integration between objective practice and value standards, representing a "post-positivist" paradigm combining positivism and constructivism.

3.2 Think Tank Ontology Model Based on Information Transmission Theory

Comprehensive and objective cognition of the think tank ontology forms the foundation for value evaluation. Chinese and foreign scholars (including Paul Dickson and Andrew Rich from the US, Donald Abelson from Canada, and Wang Lili from China) have provided multiple definitions [14][15][16][17], as have Chinese and foreign institutions [10][11][12]. Penn defines think tanks as organizations that conduct and analyze public policy research, perform policy-oriented research and analysis on domestic and international issues, and make recommendations to enable policymakers and the public to make informed decisions on public policy. CASS proposes that think tanks are organizations that influence public policy formulation through independent knowledge products. The Shanghai Academy defines them as professional organizations that influence public policy formulation. The "Opinion" by the Central Committee and State Council clearly states that "new-type think tanks with Chinese characteristics are non-profit research and consulting institutions that focus on strategic issues and public policy as their main research objects and serve the scientific, democratic, and law-based decision-making of the Party and government" [1].

From this analysis, although no unified definition exists, three core elements are

shared: first, think tanks aim to influence public policy decisions or public opinion; second, their research object is public policy; third, they are non-profit social organizations. Overall, think tanks are essentially organizational systems that influence specific targets by generating and disseminating ideological information, possessing functions of research, dissemination, and influence. The think tank ontology includes not only the internal static research organizational structure but also the ecological organizational system comprising platforms, channels, and target objects involved in realizing think tank functions. According to information transmission theory [18][19], think tanks can be deconstructed and abstracted as an information transmission system using structural and process perspectives, comprising source, information, channel, receiver, and effect. The think tank ontology model based on information transmission theory is shown in Figure 2 [Figure 2: see original paper].

Figure 2 Ontology Model of Think Tank Based on Information Transmission Theory

Specific connotations are analyzed in Table 1 :

Table 1 Connotation of Think Tank Ontology Model Based on Information Transmission Theory

Think Tank Ontology	Analogous System	Connotation
Research Entity (Source)	Source	Resources including personnel, funding, and materials; operational management
Think Tank Output (Information)	Information	Basic theoretical research, applied policy research, and other ideological achievements
Platform Channels (Channel)	Channel	Paper and electronic channels, exchange platforms (including new media, traditional media, forums), and revolving doors

Think Tank Ontology	Analogous System	Connotation
Target Objects (Receiver)	Receiver	Decision-making departments of Party, government, and military; public; international entities
Influence Effect (Effect)	Effect	Generating recognition among decision-makers, public, and international entities

"Source" constitutes the organizational foundation for generating decision-making consultation research results; "Information" represents the main body of decision-making consultation research results; "Channel" serves as the carrier of think tank dissemination; "Receiver" refers to potential target objects of consultation results, such as policymakers and the public; "Effect" indicates the degree of influence of think tank information products on the receiver, representing the ultimate purpose. It should be noted that according to organizational structure theory in management, a think tank is an ecological organizational form, with its research entity, platform channels, product results, and target objects forming an interactive organic system rather than an isolated structure and process.

This model provides the first comprehensive, objective, systematic, and clear image for understanding the think tank ontology, upon which subsequent value discovery and decomposition of supporting indicators are based. Strictly speaking, existing major think tank evaluation institutions lack clear cognition of the think tank ontology system. For instance, the Shanghai Academy' s "iceberg model" can be roughly understood as making the visible part influence and the invisible part growth capacity; CASS' s model can be approximated as a "funnel," "incubator," or "megaphone." These ontological abstractions are neither systematic nor complete. Penn' s "competitiveness" essentially covers the values of all parts of the think tank ontology comprehensively but fails to abstract a clear image of the think tank ontology.

3.3 Construction of Think Tank Multi-Value System

Value discovery is the logical starting point of evaluation [20]. All evaluations focus on values and require clear value points. "Think tank evaluation" is merely a common abbreviation that must have its own value emphasis and concerns. For example, Penn' s evaluation focuses on the "competitiveness"

value point, the Shanghai Academy on "influence," and CASS on three value points: "influence,""management capacity,"and "attraction."However, these value perspectives are either too singular or insufficiently systematic. Theoretically constructing a systematic multi-value system for think tanks is key to grasping evaluation practices for various purposes from a holistic perspective and serves as the logical starting point for specific evaluations. John Thornton, Chairman of the Brookings Institution' s Board of Trustees, identifies three core values of think tanks as quality, independence, and influence [21], with influence as the representational factor and quality and independence as internal factors.

This paper argues that by analyzing the think tank ontology model based on information transmission theory layer by layer, we can discover and systematically define a multi-value system for think tanks, as shown in Table 2 . It should be particularly noted that multi-value means values are multi-dimensional, with each value element supported and realized by multiple factors, indirectly reflected in the multi-dimensional support of primary and secondary indicators.

Table 2 Multi-Value Analysis of Think Tank

Think Tank Ontology	Value
Entity (Source)	Development Capacity: Talent quality, financial abundance, diverse tools and means, etc.; operational management
Output (Information)	Ideational Capacity: Policy level, academic level, etc.
Platform Channels (Channel) & Target Objects (Receiver)	Dissemination Capacity: Precise and efficient communication to complete policy stakeholders
Influence Effect (Effect)	Influence Capacity

Here, "Channel" only realizes its value by faithfully transmitting information to targeted objects (the "Receiver"), which can be understood as "Channel" being a vector with direction (toward "Receiver"). Therefore, dissemination capacity represents the comprehensive value of platform channels and target objects.

The above value system represents a systematic and comprehensive value profile of think tanks based on the information transmission model. Development ca-

pacity is the foundational value, ideational capacity the key value, dissemination capacity the guarantee value, and influence capacity the core value. Simply put, a think tank must sustain development, produce valuable intellectual wisdom, possess effective channels and delivery means, and ultimately generate policy influence. This value system is an organic whole, with hierarchical relationships illustrated by the pyramid structure in Figure 3 [Figure 3: see original paper].

Figure 3 Multi-Value System Structure of Think Tank

Effect value is the core of think tank value, which is why most current evaluation systems focus on influence. Receiver value lies in whether the receiver is an accurate potential public policy stakeholder, as valuable receivers are necessary prerequisites for achieving policy influence. Channel value lies in "precisely and efficiently" delivering ideological information to receivers. Information value lies in its ideological content, which is key to generating effect value. Source value lies in its sustainable development capacity, occupying the foundational position. Additionally, the hierarchical correlations of the think tank value system determine that when selecting evaluation value elements, we must pay attention to coupling between value elements and use weighting adjustments to reflect differences in importance. Moreover, think tank value pluralism is supported by multiple elements in both value discovery and realization. The value system comprises four categories, each containing multiple sub-dimensions. For instance, effect value (influence) manifests across decision-making and public levels in sociological structural paradigms.

Based on this value system, we can conduct evaluations of relevant value element combinations according to actual needs. The value points concerned by the current six major evaluation institutions are essentially combinations of one or multiple elements of the above values.

3.4 Comprehensive Evaluation Model and Indicator System Framework

Evaluation ultimately assesses values. Based on the above multi-value system analysis, the think tank value system can serve as a comprehensive evaluation model, as shown in Figure 4 [Figure 4: see original paper].

Figure 4 Comprehensive Evaluation Model of Think Tank

Following principles of multi-perspective and independent completeness, the think tank comprehensive evaluation model serves as primary indicators for constructing the evaluation indicator system. Through "onion-peeling" layer-by-layer analysis, we identify secondary supporting elements for primary indicators and tertiary supporting elements for secondary indicators. This process essentially explores specific "value realization" and involves participation and co-construction from all parties. Indicator system construction requires theoretical analysis, multi-party investigation, consultation, repeated review, and comprehensive balancing. This paper preliminarily proposes a think tank evaluation

indicator system framework, as shown in Table 3 .

It should be noted that this indicator system remains at the framework level. In terms of implementation, it can be divided into qualitative and quantitative indicators. Secondary indicators such as "resource capacity," "basic theoretical research," "applied policy research," "media means," and "coverage objects" can be quantitatively evaluated through data on quantity and quality. Qualitative indicators like "operational capacity" and "dissemination skills" can be refined to obtain relevant qualitative elements and evaluated through questionnaires and expert assessment. "Decision-making influence," "social influence," and "international influence" can be evaluated comprehensively through both quantitative and qualitative methods by collecting data on adopted decision-making consultation suggestions and conducting industry-specific surveys or expert assessments. Following this approach, we will further refine a three-level indicator system that can be characterized qualitatively and quantitatively, transforming it into questionnaires or statistical information tables for operability.

This preliminary indicator system framework can resolve logical issues such as the Shanghai Academy' s internal "growth capacity" not belonging to external influence, and academic capacity being a foundation for external influence rather than a parallel relationship. It also addresses issues like CASS' s management capacity actually being an indicator of attraction value realization, and the slight overlap between Penn' s utility and influence secondary indicators such as internet and media exposure.

Table 3 Evaluation Index System Framework of Think Tank

Primary Indicator	Secondary Indicator	Connotation
Development Capacity	Resource Capacity	Talent level: leading figures, high education, multi-disciplinary, composite types, etc. Means capacity: decision support systems, integrated discussion systems, etc. Funding capacity: research funding amount, etc. Information capacity: databases, archives, case libraries, model libraries, etc.

Primary Indicator	Secondary Indicator	Connotation
	Operational Capacity	Organizational structure: governance structure alignment with think tank development patterns. Fields and directions: specialty areas and main research directions. Mechanism systems: scientific effectiveness of mechanisms (research mechanisms, result quality control and application, talent and funding management, exchange and cooperation, etc.)
Ideational Capacity	Basic Theoretical Research	Academic level: quantity and quality of published papers, etc.
	Applied Policy Research	Quantity and quality of policy recommendations, special reports, etc.

Primary Indicator	Secondary Indicator	Connotation
Dissemination Capacity	Media Means	Paper and electronic channels, exchange platforms (including new media, traditional media, forums), revolving door channels, etc.
	Coverage Objects	Precise and effective coverage of domestic government decision-making departments, industry sectors, public, and international entities
	Dissemination Skills	Public relations capacity with government and other entities, methods and techniques, etc.
Influence Capacity	Decision-Making Influence	Degree of adoption by decision-making levels
	Social Influence	Degree of public recognition
	International Influence	Degree of recognition in international industry sectors

3.5 Evaluation Methods and Approaches

The author will subsequently provide a complete three-level indicator system and design qualitative and quantitative questionnaires or statistical information tables accordingly. Once operational, these will collect relevant evaluation information for processing and analysis.

Core work must focus on scientific data acquisition methods and reasonable data analysis and processing methods. For information acquisition, key concerns include sources, methods, and sample sizes. First, regarding information sources, we must embrace the spirit of pluralistic construction and joint participation, widely collecting qualitative and quantitative data on various indicators from think tanks, policy stakeholders, and experts. Second, regarding acquisition methods, following the post-positivist paradigm combining positivism and constructivism, we can widely adopt forms such as telephone interviews, field visits, discussions, questionnaires, data reporting, academic resources, and big data platforms as primary and secondary sources [10][11][12]. Third, regarding sample sources, we must follow mathematical statistics theory, combining sampling data with full-sample data to ensure scientific and reasonable samples. For instance, capacity information can be obtained through full samples, while other information can be obtained through sampling.

For processing and analysis, we must first establish data conversion algorithms and rules. This includes establishing quantitative scoring conversion standards for qualitative indicators using fuzzy scoring methods to transform qualitative descriptions into vector scores, establishing normalization conversion standards for different quantitative indicator values to handle different dimensions for comprehensive processing, and establishing weighting adjustment standards using weighting coefficients to regulate coupling relationships, level differences, and importance among indicators at various levels, indirectly reflecting the pyramid structure of the value system. Second, we must comprehensively apply mathematical processing theories and methods such as mathematical statistics and fuzzy analysis to ensure scientific and reasonable processing. It must be emphasized that this work involves no "solely objective" standard but is a process of multi-party negotiation, co-construction, and subjective-objective combination among think tanks, policy stakeholders, and experts. Third, we must achieve the return from quantitative results to qualitative analysis, conducting reasonable qualitative research on quantitative conclusions to identify problems and patterns and propose beneficial recommendations regarding policy and management.

3.6 Application of Evaluation Results

Evaluation results must clearly indicate their evaluation value points and objectively elaborate on evaluation purposes, applicability, and guidance. Currently, the emphasis on think tank ranking fever has overshadowed overall think tank construction [11], even leading to interest coercion or commercial hype using think tank evaluation rankings. Think tank evaluation must scientifically and objectively analyze development trends, influencing factors, improvement suggestions, and support policies from relevant value evaluation results to appropriately and effectively leverage evaluation functions.

Think tank evaluation results primarily function in two aspects: internal governance and management of think tanks, and external support policies. Specifi-

cally, first, management departments can grasp think tank construction and development trends to optimize the external policy environment for think tank development. Second, individual think tanks can strengthen internal governance, management, and development to enhance capacity levels, achieving guidance, direction, motivation, and promotion. Third, the public can understand think tank resources, expanding think tank publicity and influence in society. Fourth, think tank research institutions can use think tank evaluation to strengthen research on think tank development patterns and promote theoretical innovation in think tank development.

4 Conclusion

This paper focuses on grasping and understanding think tank evaluation from a theoretical perspective, primarily drawing on the essence of fourth-generation evaluation theory to propose a theoretical framework system for new-type think tank evaluation. Simultaneously, it constructs an ontology model, value system, and indicator system framework for new-type think tanks, laying a theoretical foundation for subsequent specific evaluation practices.

The theories and models proposed in this paper employ logical deduction in relevant discussions and comparative verification with existing major think tank evaluation systems for rationality analysis, which will be further validated in specific evaluation practices.

The innovations and characteristics of this paper are: (1) Understanding think tank evaluation from the perspective of evaluation theory, especially fourth-generation evaluation theory, clarifying evaluation concepts, and defining think tank evaluation connotations; (2) Comparing and analyzing current think tank evaluation systems, identifying their limitations and deficiencies; (3) Proposing a theoretical framework system for think tank evaluation and its theoretical paradigm: understanding the ontology, discovering multi-values through multi-party co-construction, establishing an evaluation indicator framework, building the indicator system by analyzing value realization processes, co-constructing evaluation information through a "post-positivist" paradigm, scientifically analyzing and processing information to form evaluation results, and scientifically analyzing and using evaluation results; (4) Proposing a think tank ontology model based on information transmission system theory; (5) Proposing a think tank multi-value system and its relationships; (6) Preliminarily proposing a think tank evaluation indicator system framework; (7) Clarifying evaluation information acquisition and processing procedures and their core factors; and (8) Proposing proper application methods for think tank evaluation results.

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