Scientific Decision-Making and Modernization of National Governance: From Brain Trusts and Soft Science to Think Tanks—Theory and Practice (Postprint)

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Abstract

[Purpose/Significance] In the new era, to ensure correct decision-making for successful undertakings, it is imperative to uphold both scientific and democratic decision-making. The central government' s proposal for modernizing the national governance system and governance capability constitutes precisely the institutional development and cadre training measures designed to support the goal of achieving correct decision-making. Within this framework, scientific decision-making—including the construction and operation of a modern decision-making system composed of decision-makers, executors, think tanks, and other elements—plays a vitally important role in the modernization of the national governance system and governance capability.

[Method/Process] This paper, in the context of the new era and new journey, reviews China' s experiences and lessons in decision-making, traces the practice and development of China' s advisory mechanisms from brain trust and soft science to think tanks, and expounds that scientific decision-making requires intellectual support from the intellectual community and decision science, necessitates modern technology, and particularly depends on the construction and improvement of modern decision-making systems. As one of the two pillars of correct decision-making, scientific decision-making serves as intellectual support and essential tools and methods for building a modernized national governance system and cultivating modernized national governance capabilities.

[Results/Conclusions] In conclusion, building and utilizing think tanks, constructing and developing modern decision science, and achieving scientific decision-making alongside the modernization of the national governance system and governance capability are aimed at making correct decisions, avoiding detours and mistakes, upholding and improving the socialist system with

Chinese characteristics, better following the path of socialism with Chinese characteristics, and thereby realizing the "Two Centenary Goals."

Full Text

On Scientific Decision-Making and Modernization of National Governance: Theory and Practice from Brains, Soft Science to Think Tanks

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Abstract

[**Purpose/Significance**] In the new era, making correct decisions for the success of our cause requires adhering to scientific and democratic decision-making. The central government's proposal to modernize the national governance system and capacity represents supporting measures for institutional development and cadre training aimed at achieving correct decision-making. Scientific decision-making, encompassing the construction and operation of a modern decision-making system composed of decision-makers, executors, and think tanks, plays a crucial role in modernizing the national governance system and capacity. [**Method/Process**] This paper, situated in the new era and new journey, reviews China' s experiences and lessons in decision-making, traces the evolution from traditional brain trusts to soft science and modern think tanks, and discusses how scientific decision-making requires intellectual support from intellectuals and decision science, as well as modern technology—particularly the construction and improvement of modern decision-making systems. As one of the two pillars of correct decision-making, scientific decision-making provides intellectual support and essential tools and methods for building a modern national governance system and cultivating modern governance capacity. [**Result/Conclusion**] In summary, constructing and utilizing think tanks, developing modern decision science, and achieving scientific decision-making alongside modernization of the national governance system and capacity serve the fundamental purpose of making correct decisions and avoiding detours and mistakes. This means upholding and improving the socialist system with Chinese characteristics and better following the path of socialism with Chinese characteristics to realize the "Two Centenary Goals."

Keywords: scientific decision-making; national governance; modernization

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Entering a new era, China has become a powerful modern socialist country marching forward with great strides. Reflecting on our journey from a national economy on the brink of collapse after the "Cultural Revolution decade" to

today' s position as the world' s second-largest economy, what explains this earth-shaking transformation? The key was the decisive abandonment of "taking class struggle as the key link" at the Third Plenary Session of the 11th Central Committee, shifting the Party and state' s focus to economic construction and implementing reform and opening-up. Mao Zedong made the Chinese people stand up; Deng Xiaoping made them prosperous; and now, under the leadership of the Central Committee with Comrade Xi Jinping at its core, we are becoming stronger. At a deeper level, the erroneous national decisions at the end of the Cultural Revolution brought the national economy to the edge of collapse—a case where "ten years of catastrophe meant total loss." Conversely, the correct decisions at the Third Plenary Session of the 11th Central Committee "brought everything to life," leading from victory to victory.

Since the 18th Party Congress, the Central Committee with Comrade Xi Jinping at its core has held high the banner, made correct decisions, and "fought corruption to promote reform," winning popular support and invigorating the people' s spirit. China' s progress has been steady and forceful, achieving unprecedented accomplishments. The campaign against both "tigers" and "flies" has begun to reverse the perverse phenomenon where good cadres become disheartened and curbed the deeply detested practice of buying and selling official positions. With "anti-corruption eliminating pests and cleansing filth," while "holding up the banner to follow the correct path for common development," China' s economy has maintained high-speed growth while transitioning to high-quality development. GDP ranks second in the world, people' s living standards have significantly improved, and green environmental protection has taken root in people' s hearts. Scientific and technological achievements have emerged continuously: Tiangong, Jiaolong, Tianyan, Wukong, Mozi, large aircraft, and other major innovations. The successful defense of sovereignty in the South China Sea has demonstrated the Central Committee' s strong and wise leadership, showing the world the Chinese nation' s unyielding character. National defense construction has achieved tremendous accomplishments and earth-shaking changes. Foreign exchanges, trade, and investment have yielded remarkable results, while foreign exchange reserves rank among the world' s highest, serving as a "ballast stone." Thus, whether decisions are correct or not concerns the future and destiny of our Party and country, and the future and destiny of every citizen.

In today's complex 21st-century world, how do we make correct decisions? First, we need support from modern science and technology. Making correct national decisions is both the responsibility of politicians and intellectuals, because "everyone is responsible for the nation' s rise and fall." In such a complex modern context, relying entirely on the human brain and experience is clearly insufficient for scientific decision-making; we must incorporate modern technology and employ systematic methods combining qualitative and quantitative analysis. Democratic decision-making means decision-makers must adhere to the mass line— "from the masses, to the masses" —practice democratic centralism, and choose the best option based on collective wisdom. These are precisely the subjects of decision science research. Only by applying decision science can we

avoid or minimize errors and detours in national governance. In the new era, the Central Committee has explicitly required modernization of the national governance system and capacity, pointing out the necessary path to achieve democratization and scientification of decision-making.

2. Scientific Decision-Making: From Brain Trusts, Soft Science to Think Tanks

Think tanks, as concrete vehicles for achieving scientific decision-making, have a long history in China. In ancient times, they were called "brain trusts" (智囊), referring to resourceful individuals. *Records of the Grand Historian* noted that "Lizi was witty and resourceful, and the Qin people called him 'brain trust.' " The *Book of Han* recorded that "the Crown Prince' s household called him 'brain trust.' " Tang dynasty scholar Yan Shigu commented that "it means his whole person is filled with wisdom and calculation, like a bag filled with things." This captures the essential characteristic of brain trusts. However, what made them renowned was their use of knowledge, experience, and wisdom to assist leaders in decision-making, sometimes even directly participating in decisions and making indelible contributions to social and historical development. China' s historical brain trusts and advisors have a long tradition, assisting emperors in founding and stabilizing states throughout history. With their intelligence, they compensated for rulers' deficiencies, achieved expected victories, ensured the correctness and feasibility of decisions at the time, and formed an intangible institution adopted by successive rulers. Undoubtedly, brain trusts provided valuable intellectual support for correct and timely decisions, offering instructive examples for empirical decision-making.

In modern times, think tanks are also called idea banks, brain banks, or brain trusts, referring to political consulting and its institutions. Political consulting primarily involves policy-oriented consultation on issues with global, strategic, and comprehensive significance that can influence policy. Since the mid-20th century, political consulting as an industry has developed rapidly abroad, especially in Western developed countries. Political consulting institutions and their personnel, using modern scientific knowledge and practical experience, employing modern scientific methods and means, and leveraging collective collaborative research advantages, have made contributions that cannot be ignored to the economic, social, cultural, educational, and technological development and scientific decision-making of Western developed countries. They introduced science into the decision-making process and, through their effective consulting work, gradually transitioned empirical decision-making toward scientific decision-making. In this process, "brain trusts" evolved from individuals to groups, from 偶然 to inevitable, forming modern brain trusts that have become an indispensable link in modern political decision-making.

In China during the mid-1980s, the term "soft science" (borrowed from Japan) was widely used to summarize and describe this field. The political report of the 13th Party Congress explicitly stated: "Vigorously develop soft science." At that

time, the "Soft Science Trilogy" —*Modern Soft Science*, *New Brain Trust Theory*, and *Dictionary of Soft Science*, edited by Li Zhongshang—became popular. Comrade Chen Yun personally wrote an inscription for the trilogy: "Vigorously develop soft science." Comrade Yuan Baohua wrote the preface, while Comrades Lei Jieqiong and Qian Weichang served as advisors. Domestic and foreign experts such as Chen Yuan, Habermas, and Saas served as visiting professors. The main viewpoints of the "Soft Science Trilogy" were briefly published on the front page of *People' s Daily*' s theory section on September 9, 1994: "Vigorously develop soft science, accelerate the democratization and scientification of decision-making."

As is well known, the central government convened the National Soft Science Research Symposium in 1986, where Vice Premier Wan Li delivered a lengthy speech proposing the development of soft science to achieve democratization and scientification of decision-making. The State Science and Technology Commission took the lead in establishing the China Soft Science Research Association. Soft science—today' s think tanks—was very active. More than 30 years have passed since then, a period that has been a glorious chapter in Chinese history. The spring breeze of reform and opening-up has greened the motherland that had suffered catastrophe, and the awakened Eastern lion has shocked the world with its achievements, drawing global attention. One important factor is that Party and government organizations at all levels, from central to local levels, have gradually attached importance to establishing and improving democratic and scientific decision-making procedures and the modernization of leadership decision-making. Since the 18th Party Congress, the Central Committee has decided to treat the construction of new-type think tanks with Chinese characteristics as a major and urgent task from the strategic height of promoting scientific and democratic decision-making, advancing modernization of the national governance system and capacity, and enhancing national soft power.

3. Scientific Decision-Making: Intellectual Support from Intellectuals and Decision Science

The core or theoretical form of think tanks and soft science is decision science. It originates from China' s ancient brain trust tradition, draws on Western governance experience and theory, and has formed and developed through China' s revolution, construction, and reform and opening-up. In the new era, it has received high attention from the Party Central Committee. It is the product of our Party and government' s summation of positive and negative experiences in decision-making work, adhering to the ideological line of seeking truth from facts. It is the product of adapting to China' s economic and social development in the new era, especially promoting modernization of the national governance system and capacity, and the product of the highly developed contemporary science and technology.

3.1 Decision Science Should Provide Intellectual Support for Democratic, Scientific, and Correct Decision-Making and Serve as the Overall Design Department for Socialist Construction Comrade Deng Xiaoping stated, "China cannot develop without science." He also pointed out: "The country is so large and the situation so complex that reform is not easy; therefore, decision-making must be prudent." This tells us that not only is there no insurmountable gap between decision-making and science, but there is also a necessary connection—modern decision-making must rely on scientific progress. From a global perspective, science and technology (especially since the new scientific and technological revolution) have penetrated all aspects of human material production and social life, becoming a basic characteristic of modern social civilization. Scientific and technological achievements are not only directly applied to production, substantially increasing labor productivity and greatly improving people' s living standards, but also changing people' s concepts of life, values, and even the entire social historical view. Under these modern conditions, increasingly complex natural and social phenomena, especially intricate and changeable economic and social phenomena, require people to observe, analyze, identify, judge, and make scientific decisions from a macro perspective. However, making scientific and correct decisions in social practice is not easy, and the importance of scientific decision-making has been recognized only through long-term positive and negative experiences. Examples of decision-making failures abound internationally, and we have many such examples domestically as well, such as the "Great Leap Forward," the "Reckless Advance," and the "Cultural Revolution," which brought unprecedented disaster to the Chinese nation. These provided extremely painful lessons. Even in daily work today, leaders making decisions based on experience and "gut feeling" remains common practice. When decision-making problems arise, they are difficult to correct; only when major problems emerge do people scramble to plug holes or set things right, but by then it is too late. This kind of blind, hasty decision-making must be changed. As for how to change it, an extremely important approach is to rely on science—relying on think tanks, soft science, or decision science that takes decision research as its mission to achieve democratic, scientific, and correct decision-making.

Regarding the concept of think tanks, soft science, or decision science, we believe it is a highly comprehensive emerging science centered on decision research, constituting the entire scientific knowledge system and technical means that support democratic and scientific decision-making. It mainly employs (including creating and improving) decision theory, uses systematic methods combining qualitative and quantitative approaches along with effective traditional methods, utilizes modern scientific and technological means such as electronic computers, and studies decision-making, systems, management, planning, strategy, and other decision issues in political, economic, cultural, educational, scientific, technological, military, and social fields, as well as coordinated development issues among various fields. It pays great attention to starting from studying the internal connections of various complex natural and social phenomena to iden-

tify their patterns, thereby providing scientific basis and optimization schemes for solving various decision-making problems and for decision-making at all levels and of all types. In this sense, think tanks, soft science, or decision science is the social software engaged in decision research and its production process, thus having a unique social status.

Thus, the most important criterion for distinguishing decision science should be whether it is related to decision research and serves decision-making. Without serving decision-making, general consulting and management activities might be classified as think tanks or soft science, making it a "soft" and "miscellaneous" "super science" that is everywhere and all-encompassing. Without serving decision-making, think tanks and soft science might retreat into ivory towers of academic research, losing their inexhaustible vitality oriented toward practical reality. Think tanks and soft science benefit humanity by reducing errors, breaking through traditional research methods in natural and social sciences, and convincingly demonstrating with their research results that humanity has the ability to shape its own future in modern times. The failure of decision research is directly and clearly linked to human destiny. Soft science determines its historical mission and development prospects precisely because decision-making issues exist in any era, any country, and any region, all requiring decision-making and decision research. Of course, think tanks and soft science cannot be the application and development of a single discipline; their high degree of comprehensiveness is self-evident. In today' s world, economic and social phenomena are increasingly complex, and making scientific macro-level decisions about them is absolutely impossible for any single individual or discipline to accomplish. This requires cross-field, cross-disciplinary comprehensive research, the integration of natural and social sciences, and collaborative efforts among various experts. Undoubtedly, decision science should shoulder this sacred and unshirkable mission.

In China, the main function and role of decision science should be to provide intellectual support for the democratization and scientification of decision-making and to serve as a brain trust and think tank. Theoretically, its task is to explore, understand, and summarize the decision-making process and its development and patterns. Specifically, the task of decision science research is to provide optimization schemes and scientific justification for various types of decision-making, to make predictions and plans for the development of a department, region, country, or even the entire human society, thereby reducing unnecessary losses caused by decision-making errors and benefiting humanity. The purpose of decision science research is clear: to achieve scientification and democratization of decision-making. Ultimately, decision science introduces science into the decision-making process, uses modern decision theory, utilizes modern scientific and technological means, employs democratic and scientific methods, and transforms decision-making into a process that draws on collective wisdom, has a basis in evidence, and has institutional guarantees, thereby achieving scientification and democratization of decision-making to greatly promote China' s reform, opening-up, and modernization drive.

The core or theoretical form of think tanks and soft science is decision science, a comprehensive discipline based on modern natural and social sciences that studies decision-making principles, procedures, and methods. This (broadly defined) decision science is the result of the highly developed modern science and technology in complex social factors and the direct product of large-scale socialized production. It is of great significance for achieving scientific decision-making. Since the mid-20th century, with the rapid development of social economy and science and technology, the issue of scientific decision-making has become increasingly important. The emergence of new disciplines such as systems theory, information theory, control theory, the science of science, forecasting science, and management science, especially the widespread application of electronic computers and modern communication technology, have provided modern means for human decision-making activities. Decision science developed under these circumstances after World War II. Although not yet mature, it has formed a basic system in theory and methodology, theoretically including the composition and elements of decision-making systems, decision organization theory, and various types of decision-making.

The development of decision science in China is the product of our Party and government's summation of positive and negative experiences in decision-making work, adhering to the ideological line of seeking truth from facts. It is the product of adapting to the urgent needs of economic and social development in the new era and the product of highly developed contemporary science and technology. With the comprehensive unfolding of China' s modernization drive and the in-depth implementation of reform and opening-up policies, various departments and regions have raised numerous new issues in practice, requiring an increasing number of major scientific, technological, economic, and social decisions. This has led to increasingly urgent needs for science. The important position of think tanks and soft science has also been increasingly recognized and accepted. Comrade Qian Xuesen provided a vivid metaphor for this: the "overall design department for socialist construction." He cited the example of researching and manufacturing atomic bombs, hydrogen bombs, and missiles, pointing out that due to their complexity, such undertakings must be led by the Party and government but should have an overall design department led by a chief designer. The plan determined by the overall design department is a proposal made by the chief designer through scientific justification and extensive experimentation, with the final decision-making responsibility resting with the leadership department. He further explained the "overall design department for socialist construction" as "consulting service units for the Party and state," thereby not only establishing the position of think tanks, soft science, or decision science but also pointing out the main tasks of decision science research.

3.2 Seriously Summarize Positive and Negative Decision-Making Experiences and Establish and Improve Modern Decision-Making Systems Mao Zedong' s famous saying "learn warfare through warfare" points to the importance of "summarizing experience to facilitate future battles." In

decision-making practice since the founding of the People' s Republic, China has experienced the great transition from war years to peaceful environments and from destroying the old world to building a new one, accumulating valuable positive and negative experiences. The Party' s land reform and collectivization in rural areas and socialist transformation of capitalist industry and commerce in cities were great victories and examples of successful, correct decision-making. However, after 1957, "leftist" thinking began to emerge and gradually became dominant. The "Great Leap Forward"and people's communes in 1958, especially the "Cultural Revolution" that began in 1966 and lasted for ten years, were "disastrously leftist" and failed to follow the laws of socio-economic development. The result of this "leftism" was very slow socio-economic development, leaving our national economy on the brink of collapse when the Cultural Revolution ended. We must absolutely not allow such examples of serious decision-making errors to be repeated! Precisely because of these historical lessons, our Party' s Third Plenary Session of the 11th Central Committee made the correct major decision to shift the Party' s work focus to economic construction. This major decision, centered on economic construction, and the resulting basic line of "one central task and two basic points" have guided the entire nation to fight a beautiful turnaround battle over several decades. Our economic development, political stability, ethnic unity, and social progress are indeed very good. We must seriously summarize the experiences of successful decision-making in these years of reform and construction and continue to explore better ways for democratic and scientific decision-making so that we can advance with even greater strides.

At the same time, we must also learn from international experiences in scientific decision-making. American economist Herbert Simon proposed the "bounded rationality" theory, which played an important role in the development of management science. Simon argued that the subjects studied by economics (especially firm theory), cognitive psychology, and organizational theory are actually the same thing—the human decision-making process and problem-solving process. The human thinking process, like its products, is a subject of fundamental importance for the continuous progress of economic theory and economic knowledge. He has been seeking satisfactory human decision-making processes. Based on my years of study and work experience in Western countries, I have asked at relevant meetings: Why can a scholar, actor, businessman, or other professional in some Western developed countries become prime minister or president and immediately govern after winning an election? What is the reason? It lies in their modern decision-making systems and institutions. For example, Germany' s "Five Sages" —the "Expert Council for the Assessment of Overall Economic Development"—submits an annual report to the federal government on economic development, answering questions about the state of the German economy and its foreseeable development problems. According to its statutory mandate, it indicates the path of economic development and explains how to "achieve sustained, moderate growth while ensuring stable price levels, high employment, and balanced development of foreign economic relations." The federal govern-

ment not only holds a public ceremony six weeks before Christmas each year where the "Five Sages" submit their annual assessment report to the federal chancellor but also, according to legal provisions, "must respond to the assessment within eight weeks." Such assessment reports have played a guiding role in Germany' s economic development and have received attention from all sectors of society. Similarly, when the Japanese prime minister forms a new cabinet, he almost simultaneously organizes his private brain trust. U.S. presidents have also been adept at using think tanks to support their decision-making capacity and leadership, with the RAND Corporation becoming world-famous in this regard.

Regarding modern decision-making systems, they can be summarized as decision-making operation systems formed in the process of applying modern decision science to decision-making practice, generally including five systems: information system, brain trust system, decision-making system, execution system, and feedback system.

First, the information system plays a fundamentally important role in modern decision-making activities. In the information age, information is an essential factor for decision-making. Modern decision-making must attach great importance to establishing specialized information agencies that collect, statistics, store, retrieve, disseminate, and display relevant intelligence materials. At the same time, electronic computers should be used to analyze, research, and comprehensively process various data, providing reliable intelligence and laying a solid foundation for correct decision-making.

Second, the brain trust system, also called the "external brain system," is a direct product of human decision-making activities entering a new historical stage. Located within or outside decision-making institutions at all levels, the brain trust system is a consulting agency specializing in serving decision-making, such as "brain trusts," "think tanks," or "idea factories." These agencies are composed of natural scientists, social scientists, and engineering and technical personnel from different specialties. To establish an effective brain trust system, the intellectual structure of the system must be considered, and attention must be paid to the independence of the brain trust structure and the freedom of research work, so that decision-making problems can be systematically studied. Through repeated exchanges and intellectual resonance within the expert group, high-level preliminary options can ultimately be provided for decision-makers to choose from.

Third, the decision-making system is the core of the modern decision-making system, generally composed of several decision-makers. For example, in the national decision-making system, the decision-making system is the country' s highest leadership collective. In regional decision-making systems, the decision-making system is composed of regional leaders. In corporate decision-making systems, the decision-making system is composed of managers, factory directors, and other responsible persons. The main task of this system is to conduct systematic analysis, comparative research, and weigh pros and cons of various

options provided by reliable systems, and to be adept at selecting the optimal solution.

Fourth, the execution system, or command system, is the stage where decision results enter the implementation phase of practical solutions—the execution process of decisions. If governors and county magistrates are decision-makers for provinces and counties, then the various departments under their jurisdiction can be seen as executors and implementers of decisions. Good decisions made by governors and county magistrates are not completed at one time; they need continuous adjustment and re-decision-making based on execution to achieve the goal of doing things well. As Comrade Mao Zedong said: "After the political line is determined, cadres are the decisive factor." This tells us how important decision execution is and how important the quality of decision-makers and decision executors is for scientific decision-making and achieving predetermined goals. Of course, the execution system itself also includes some decision-making activities; the difference is only that they are decision-making activities at the next level.

Fifth, the feedback system is an important link in the decision-making system. When the execution system encounters problems and difficulties in its work, in addition to trying to solve and overcome them itself, an important link is to reflect these problems and difficulties to the decision-making system so that the decision-making system can make timely adjustments and supplements. The decision-making system is responsible for decision-making, and the execution system is responsible for implementation—this is decision feedback. Although existing decision-making systems generally do not have specialized feedback agencies, other systems, especially the execution system, must attach great importance to playing their own feedback functions. The Chinese government' s practice of sending work teams from leading organs to grassroots levels to supervise and guide the implementation of certain policies is a good method of feedback.

The above five systems of the modern decision-making system are internally interrelated, indispensable, and inseparable. The work procedure actually always begins with the information system, which provides intelligence and information materials for the brain trust system. The brain trust system provides optimized solutions and consulting reports for the decision-making system. The decision-making system makes decisions and delivers them to the execution system for implementation. The feedback system then feeds back implementation to the decision-making system and other systems. The organic cooperation and effective operation of these five systems constitute a scientific modern decision-making system.

In China, especially since reform and opening-up, modern decision-making systems and institutions have been gradually established and improved. Decision science workers and political consulting institutions have made their contributions to China' s construction and reform. However, from the overall setup of China' s Party and government institutions, there remains a characteristic of

bloated execution agencies and weak consulting agencies. The result is large institutions with overstaffing, and there are indeed phenomena of decision-making by a few people "shooting from the hip" at all levels, making decisions lack scientific basis. The main drawbacks of existing consulting agencies are that, statistically speaking, there are many people and many institutions, but the actual quality is not high. They are also fragmented and "serve their own masters," leading to low-quality consulting agencies. Coupled with seriously insufficient consulting funds, insufficient quantitative analysis, and undetermined legal status of consulting work, existing consulting agencies cannot fully play their proper role. Regarding commissioned research projects from ministries and commissions, there is a widespread phenomenon of "emphasizing project approval and competing for funds while neglecting results," to the point where it becomes problematic who will read and use the research reports, not to mention that some project funds are diverted or even embezzled, despite those reports having undergone so-called expert acceptance. Therefore, building and improving our own socialist political consulting agencies is a practical step in streamlining institutions and improving efficiency in political system reform, as well as an important measure and scientific guarantee for developing socialist democracy and achieving scientific and democratic decision-making in leading organs.

In summary, while seriously summarizing positive and negative decision-making experiences, we must gradually establish and improve a modern decision-making system and institutions with Chinese characteristics to achieve modernization of the national governance system and capacity.

3.3 Cadres at All Levels Should Adapt to the New Era, Learn to Apply Decision Science and Think Tanks, and Win Victories in Reform and Construction Through Democratic and Scientific Decision-Making Comrade Chen Yun wrote an inscription for the "Soft Science Trilogy" : "Vigorously develop soft science." As is well known, Comrade Chen Yun consistently advocated a scientific attitude of seeking truth from facts and a dialectical method, pointing out that any leader guiding work should "not blindly follow superiors, not blindly follow books, but only follow reality." Methodologically, he advocated comprehensively understanding and analyzing actual conditions, conducting multi-faceted comparisons of various opinions, policies, plans, and solutions, and making decisions only after repeated consideration. In short, these are the six characters Comrade Chen Yun taught us: "comprehensive, comparative, repeated." This valuable experience tells us that we must attach great importance to establishing correct decision-making thinking and adopting correct decision-making methods. Soft science, as the knowledge system of modern decision-making systems and procedures in the new situation, relies precisely on science and democracy. To promote democratization and scientification of decision-making, we must have both sufficient theoretical basis and rich practical experience.

First, we must adhere to implementing the decision-making policy of "from the masses, to the masses," taking the broad masses of the people as the political foundation of decision-making. This means that when making decisions, we must widely listen to the people' s opinions, reflect their wishes, represent their interests, and embody their will. On this point, the communique of the Sixth Plenary Session of the 13th Central Committee pointed out: "We must adhere to the principle of from the masses to the masses, establish and improve democratic and scientific decision-making and decision execution procedures, and ensure that decision-making and decision execution conform to the people' s interests." This connects the democratization and scientification of decision-making with our Party's mass line and views the issue from the height of Marxist philosophical epistemology (practice—knowledge—re-practice). The democratization of decision-making in China is specifically reflected in the construction of democratic politics and citizens' participation in and discussion of politics.

Second, adhering to democratic and scientific decision-making procedures must rely on scientific circles and intellectuals as the main carriers of science, follow scientific laws, and take the comprehensive advantages of combining modern natural and social sciences as the scientific basis for decision-making. Comrade Deng Xiaoping once said: "To smoothly achieve our construction and reform tasks, we must ensure the scientific nature of decision-making. From the central to local levels, the role of intellectuals is increasingly prominent in decision-making research, demonstration, consultation, formulation, and organization and implementation." This means that the carriers of decision-making research are intellectuals who, as part of the leading working class, participate in the decision-making process and provide intellectual support for decision-making. Their participation reflects both the scientification and democratization of decision-making, as they are also part of the masses.

Third, our cadres at all levels should learn to apply decision science and think tanks to quickly improve their decision-making level and ability. We are currently facing an excellent opportunity for comprehensively deepening reform and development. To seize this opportunity and achieve better development, cadres at all levels must strengthen their learning, including the study and application of natural sciences. If our past decision-making mistakes meant "paying tuition fees," then from now on it should be clear: leaders must quickly improve their decision-making level and ability and learn to make democratic, scientific, and correct decisions. Otherwise, we will hold decision-makers accountable for their mistakes and will no longer allow honest but mediocre leaders to harm the country and the people. Comrade Mao Zedong' s instruction that the main responsibility of leading cadres is to "produce ideas and use cadres" once guided us to victory, but today we must develop it further: "cadres must be used, and ideas must be produced," but not entirely through individual "gut feeling." Instead, we must learn to choose—to select ideas and choose the best. To select ideas and solutions, someone must first produce them—this is the work of think tanks. Moreover, we need various think tanks from central to local levels, from domestic to international, and from military to civilian sectors.

Our cadres at all levels, as decision-makers, are both the embodiment of the subjective capacity of the decision-making system and its most active and dynamic factor, as well as the drivers and operators of the decision-making system —the key to the system' s success. Comrade Mao Zedong' s statement that "after the political line is determined, cadres are the decisive factor" speaks to this truth. Therefore, our Party has always had strict requirements for cadres, especially leading cadres. Under new circumstances, we should also require our leading cadres to be talents with decision-making ability, achieving "courage, learning, and insight" : "courage" refers to the daring and boldness in decision-making, meaning the ability to make prompt decisions; "learning" refers to the scientific knowledge that decision-makers must master to conduct scientific decision-making; "insight" refers to the decision-maker' s ability to effectively organize and apply their "learning" when facing decision-making problems. Only when a leading cadre possesses an intelligent structure of learning and insight, along with qualities of great wisdom and courage, open-mindedness, strong principles, and flexible adaptability, can they make correct decisions and lead the broad masses to overcome various difficulties and win victories in construction and reform. Here, it must be emphasized that leading cadres as decision-makers must learn to manipulate and control the decision-making system, must attach importance to and devote themselves to establishing and improving modern decision-making systems and procedures, and must learn to use decision science as a modern decision support system and think tank tool.

In summary, building and utilizing think tanks, constructing and developing modern decision science, and achieving scientific decision-making and modernization of the national governance system and capacity serve to make correct decisions and avoid detours and mistakes. This means "upholding and improving the system of socialism with Chinese characteristics" and "resolutely eliminating all outdated ideological concepts and institutional mechanisms, breaking through solidified interest barriers, absorbing beneficial achievements of human civilization, building a systematic, scientifically standardized, and effectively operating institutional system, and giving full play to the superiority of China' s socialist system" to better follow the path of socialism with Chinese characteristics. Today' s world is a competitive one. Although we advocate peaceful development and cooperation, the law of the jungle still applies—backwardness invites bullying. At the core of competition is competition in systems and management, including constructing and developing decision science for scientific decision-making, building modern think tanks, and achieving modernization of the national governance system and capacity. Intellectuals and leading cadres in our new era should have a clear understanding of this, should combine China' s reality to make achievements in scientific decision-making, and should strive to achieve the "Two Centenary Goals" and the great rejuvenation of the Chinese nation.

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