

Research on the Scientific Research Evaluation Innovation System of Humanities and Social Sciences in Research I Universities under the New Situation

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Abstract

In this article, the authors believe that research evaluation is a crucial method for scientific management in colleges, as well as an important reference for configuration of scientific resources. With development of knowledge economics in 21st century, research evaluation has become more and more profound. As a pronounced part of national innovation system, colleges are filled with talents, massive knowledge and complete scientific innovation system, which are considered as main force of innovation on knowledge and science. In new situation, comprehensive reformation of advanced education is fully implemented and construction of 'Dual-First Class' is completely started. In addition, development of philosophy and social science and construction of Chinese characterized innovation system philosophy and social science are tactic missions to research-based universities. As a consequent, completed evaluation system for researches in art and social science is required for research-based universities. Colleges are supposed to encourage everyone to build a 'free and compatible' academic environment, and to convert 'project and product-based' focus into 'academic development-based' focus. It requires colleges to value desire of original innovation and social value as the highest standard of evaluation system of art and social scientific research in order to guide teachers to achieve research product with high quality. Meanwhile, emphasize the importance of the experts' status in the evaluation method, and use the academy as the lead and administration as the protection to provide support platform and long-term mechanism for the major

breakthroughs in scientific research performance of the teaching and research staff.

Key words: Humanities and social sciences; Scientific research evaluation system; Innovation

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21st century is the century of knowledge economics. Countries around world regard scientific research as important support for development strategy. With profound funding invested to colleges and research institutions, scientific research has drawn lots of attention, as well as distribution and funding usage. In this regard, some developed countries and regions have designed scientific research evaluation system led by the nation (Ding, 2008).

Currently, scientific investment is increasing gradually. For example in 2015, according to data published by National Bureau of Statistics, national investment on 'research and experimental development' has overcome 1400 billion RMB, which occupies 2.1% of total GDP. In recent 5 years, annual increment is greater than one hundred billion RMB. However there is no continuous, united, comparable and effective method on establishment of accountability system in terms of efficiency of funding usage, which reflects in difference between scientific competitiveness and international status. Hence it is of great importance to fully learn from advanced countries and regions, to establish a quality-oriented scientific research evaluation system, and constantly complete the quality of scientific research system. Advanced colleges, as an important part of national innovation system, are the cradle of knowledge innovation and the new force of scientific and technological innovation. In the new

situation, the comprehensive reformation of advanced education in our country has been fully implemented. The construction of the “double first class” in colleges and universities has been fully started. The prosperity and development of philosophy and social sciences, and the construction of the innovation system of philosophy and social sciences with Chinese characteristics has become critical strategic task in advanced educational institutions, especially research-based universities. Hence it is required to improve and complete art and social science research evaluation system for research-based universities in the new situation, which is very important for improving the innovation ability of colleges and universities, promoting the construction of “double first class”, promoting the comprehensive reformation of advanced education and realizing the innovation-driven development.

1. INTRODUCTION: ISSUES AND RESEARCH REVIEWS

1.1 Urgent Innovation Needed on the Evaluation System of Scientific Research in Philosophical and Social Science

In 2011, “General Office of the CPC Central Committee, Notice of forwarding ‘Opinion of Bureau of Education on further development of philosophy and social science in advanced colleges’ by General Office of Department of States”(GOFC (2011) No. 31) and “Opinion of Ministry of Education on further improvement of research evaluation of philosophy and social science in advanced colleges”(ESS (2011) No.4) suggested that in order to better utilize research evaluation in guide, excitation and diagnosis to the development of philosophy and social science, it is meaningful, both theoretically and practically, to improve philosophy and social science research evaluation, to insist on fare, justice and open, to insist on unifying value and science, nation and international, inherit and explore, to guarantee evaluation is under sunshine. At philosophy and social science conference, Jinping Xi’s talk pointed out that “a country without a developed natural science or philosophy and social science cannot stand in the forefront of the world. Philosophy and social science and scholars are irreplaceable in insisting and developing socialism with Chinese characteristics. To keep developing socialism with Chinese characteristics, it is necessary to emphasize philosophy and social science, combine great practice of socialism with Chinese characteristics, and to accelerate construction of philosophy and social science with Chinese characteristics, he highlighted that “it need establish a scientific authority, an open and transparent evaluation system of philosophy and social science achievements, to establish broadcast system for excellent results, to elect and promote outstanding achievements.”

Scientific research is key point and focus of competition among advanced colleges and research

institutions around world, as well as a decisive and critical factor of comprehensive capability of research institution. Under the circumstance of entry of new Chinese economic condition, the design of dynamic and reasonable evaluation method and model according to basic laws of philosophy and social science research and behavior choice of people is an important part of scientific research activities. Innovation is the spirit of a nation that keeps an inexhaustible power for forward movement. The innovation activities on platforms of colleges and universities, scientific research institutions and enterprise R & D institutions are important innovation practices of a country and region in the age of knowledge economy. For subject and organization engaged in scientific innovation research activities, scientific and effective evaluation on scientific research is an important content to promote the scientific research management innovation, to optimize the research resources allocation and to build the modern scientific research management system. After establishment of the nation, with 60 years of explore and practice, to seek truth and pragmatism in improvement of scientific evaluation of scientific research in the new period and new stage, to construct active academic environment, to actively guide improvement of research quality and innovation ability, to establish innovation system of Chinese characteristic philosophy and social science, and to fully promote development of philosophy and social science are of critical importance to advanced education of our country in age of great change.

1.2 Rich Research Products of Domestic and International Research Evaluation

Foreign countries used quantitative analysis method on research evaluation initially, which is effected by subject factors. Hence people gradually involved methods from bibliometrics, mathematics and economics in research evaluation to make it more scientific. Therefore research evaluation was in stage combining qualitative and quantitative analysis (Zhang, 2010). Currently, peer-review is widely applied in research evaluation, which leaded by experts’ opinion and associated with quantitative research indicator, with different standard to different subject. Usually it uses the third party to form a specialized agency to assess. Main task is overall assessment of scientific research for research institutions, schools, not for individual scholars. Since 1950s, research evaluation has the trend of being more systematic, institutionalized, and regular. Since evaluation office was established in the 1970s, National Science Foundation (NSF) started to explore the basic research and quantitative assessment method of its impact and provided a classic report in this field, ‘Assessment method of bibliometrics’. However generally speaking, research evaluation practice and methods are far behind research in evaluation method. For example, there is no difference in practical method between assessments of

ongoing and completed studies. Even more, there are limited institutions using the most basic method. Various evaluation methods and corresponding technologies are in contrast of few institutions that are using them. In the field of comprehensive evaluation methods and evaluation models, Professor T. L. Saaty, a renowned operational scientist at the University of Pittsburgh in the United States, presented an analytic hierarchy process for multi-objective decision-making in the 1970s, which was quickly applied and promoted in practice. In 1978, Professor A. Charnes, Professor W. W. Cooper of the University of Texas, USA, and so on proposed the relative validity. Since 1990s, in order to promote the comprehensive and effective evaluation of scientific research, foreign researchers have also introduced the gray system method, artificial neural network method, matter element analysis and other methods into the research field of evaluation methods, and promoted the rapid development of evaluation theory and method. For example, The Data Envelopment Analysis (DEA) method is used to evaluate a limited number of units of the current research on bibliometric theories and methods by some research institutions in Europe, such as University of Leiden in Netherlands, Dutch Technical Foundation, University of Sussex and Hungarian Academy of Sciences (Li, 2010).

Research on scientific research evaluation in China started since 1980. After evaluation of scientific research articles being discussed at second academic seminar of national science, Shisheng Luo, Junping Qiu, Chongde Wang and other scholars introduced bibliometrics method into China, and become the first domestic group to study bibliometric method. In late 1980s, *Social Science*, edited by Yulong Xia, *Introduction of Management of Social Scientific Research*, edited by Jiankun Chen, *Theory and Practice of Management on Social Science*, edited by Wuzhu Zhang, have discussed rules, standards, indexes, and system of evaluation of social scientific products. In 1990s, research evaluation was emphasized by governments, research management organizations and research institutions. Evaluation method research has also been rapidly developed. Evaluation method research was no longer limited to exchanging practical experience and turning to methodological model and the development of indicators and other aspects of evaluation. In 1982, Professor T. L. Saaty's student H. Gholamnezhad introduced the Analytic Hierarchy Process to China at an international academic conference in Beijing, which immediately led to a research boom in academia and was quickly applied to scientific research. In 1995 Chinese Academy of Social Sciences set up the key project of 'social science achievement evaluation index system research and design', through the Delphi method design a more complete index system for expert consultation, which was classic representative result in the field. In the 21st century, with the improvement of the status of

philosophy and social science, government departments and universities attached great focus and support to systematic research and platform construction of scientific and social scientific research evaluation. National Social Science Fund and the Ministry of Education, respectively, funded Nanjing University, Renmin University, Wuhan University to systematically research philosophy and social science research evaluation. Among them, DEA method, gray system method, artificial neural network method, TOPSIS method and other evaluation methods have also been studied and developed in China. For example, edited by Dachun Liu, *China Humanities and Social Sciences Development Report 2005 ---- boutique and evaluation*, *China Humanities and Social Sciences Development Report 2007 ---- evaluation of the limits and management innovation* (Renmin University of China Press) and other results discussed and analyzed many factors that affected the scientific evaluation of philosophy and social sciences, such as the anomie of the evaluator's role, the excessive quantification, the administrative intervention and the basic restriction of the evaluation system. In 2006, Junping Qiu, Wuhan University, discussed the research on the evaluation of social achievements at home and abroad in the research of *Innovative Ability and Evaluation of Philosophy and Social Sciences* (Wuhan University, 2006). Zhuanghai Shen discussed the innovation and innovation ability of philosophy and social science in terms of connotation, format, influencing factors, factor conditions, characteristic of law and countermeasures, summing up the research on the model, the principle and the system construction of the scientific and social science scientific research evaluation (Chen, Xu & Han, 2009). In addition, our scholars also put forward the weighted rank sum ratio method and other evaluation methods, which are applied to practice.

2. COMPREHENSIVE COMPARISON BETWEEN DOMESTIC AND INTERNATIONAL EVALUATION METHODS AND MODELS OF PHILOSOPHY AND SOCIAL SCIENCE RESEARCH

2.1 Domestic and International Evaluation Methods and Models of Philosophy and Social Science Research

Since later 20th century, research evaluation activities showed trend of systematization, institutionalization and regularization. Countries, including most of members of OECD (Organization of Economic Cooperation and Development) emphasized accountability of scientific research founded by government to tax-payers, explaining

usage of funding. In general, international evaluation standards include citation, academic award, and patent and market standards. The scientific evaluation of universities and research institutions has two common purposes that are to promote the improvement of scientific research and accountability for the use of public funds. In term of method, it mainly includes peer evaluation method, citation measurement method, and social evaluation method. Peer review system includes both internal and external peer reviews. Although the impartiality and objectivity of peer review system are questioned, it is still the main evaluation method. In order to make up for the shortcomings of peer review method by correction from standardizing operation process, United States colleges and universities generally introduced citation into measurement method of philosophical social science basic research results evaluation process, as complement and reference for peer review. Citation measurement method evaluates mainly based on citation frequency of scientific research results and comprehensive calculation of impact factor. The social evaluation method is mainly based on hired external professional bodies, including policy assessment, opinion polls and social experimentation. After the implementation of the policy, some departments or public interest and the environment of some regions will be affected, the feasibility and effectiveness of policy are also subject to public attitudes as well. The attitude of public to policy indirectly reflects the evaluation and judgment of research results of philosophy and social science. Social experiment method puts theory, principles, plans, and etc. gained from philosophy and social science application and development research into a specific social environment, generally in a small area such as a region or a department, for test (Wu and Qiu, 2008). The evaluation standard mainly includes truth standard and value standard. The standard of truth includes scientific standard, continuity standard, innovation standard and comprehensive standard. The standard of value includes standard of economic value and political value, which mainly emphasizes whether the achievements of philosophy and social science can really transform the society and bring benefit to the people. The main body of the evaluation includes peer experts, philosophy and social science researchers and public; the public as one of the main assessment because the introduction of US policies and regulations often have the previous social science research results as a theoretical support. Whether a research result can really transform society and bring benefits to people is judged by public, which holds direct feelings of the laws and regulations. The evaluation process is firstly applied by the teacher or researcher, followed by submission of self-recognized scientific research results. Then it is evaluated by the school organization of peer experts and peer review experts, with introducing of citation measurement evaluation, to determine its level of research or performance. The

evaluation of research is mainly divided into level evaluation and performance evaluation, in which the level evaluation is mainly carried out when the title personnel is promoted. The evaluation period is up to 12 years, and only published paper published and works are evaluated, not including other forms of research results such as projects, awards, funding and so on. The performance evaluation is mainly performed when salary is increased; the increment occurs every 2-3 years. Firstly the individual will apply for it with summary of 2-3 years of performance for the faculties and schools to process two-levels review to determine the results. The content of the evaluation mainly includes: teaching hours, the amount of scientific research funds completed, guiding students to carry out research activities, content and frequency of participation in professional and related social welfare activities, excluding published papers and writings.

2.2 Evaluation Method and Evaluation Mode of Scientific and Social Science in Domestic Universities

In order to further standardize and flourish the development of philosophy and social sciences in colleges and universities, the Ministry of Education has promulgated a number of regulations and methods such as “Opinion of Ministry of Education on further improvement of research evaluation of philosophy and social sciences in advanced colleges (2003)”, “Opinion on further improving the quality of humanities and social sciences research”, “Management Measures on humanities and social sciences research projects (2007)”, “Identification and results of achievements in humanities and social sciences research projects (2007)”, “Rewards methods of the outstanding achievement award of scientific research in colleges and universities (humanities and social sciences) (2009)” and so on, since the beginning of the 21st century specifically targeting the new situation and problems in the scientific and technological management of philosophy and social sciences. On this basis, the National Social Science Planning Office and the Ministry of Education have set up major and key issues and commissioned the Nanjing University, Wuhan University, Renmin University and other colleges and universities on the philosophy and social science research evaluation. Correspondingly, in order to accelerate the development, colleges and universities have developed their own evaluation system to assess and promote development of philosophy and social sciences. At this moment, the university scientific research evaluation methods and models are divided into internal assessment, peer review and citation measurement. Among them, the annual philosophy and social science CSSCI (Social Science Citation Index) literature retrieval system published by Nanjing University is the main search tool that has been widely used in domestic universities for scientific statistics and evaluation. Its collection status has also

been widely used across the country as an important basis for evaluation on the academic level of both units and individuals. In conclusion, the current evaluation system of domestic colleges and universities is designed mainly from the perspective of scientific research management, which generally includes: a. Scientific research projects (mainly funded projects). The main observation is on the project level, quantity, funding and other indicators; b. Research papers. The main observation is on academic monographs, SSCI papers, core journals and other papers; c. High-level results. The main observation is on the awards from the Ministry of Education and the provincial philosophy and social science achievement; d. Academic exchanges. The main observation is on being hosts to undertake high-level academic conference and guest speakers; e. Academic influence. The main observation is on positions in academic institutions and expert group services, being part-time reviewers for academic journals, research platform service, individual academic award, selected high-level talent (team) plan and other indicators. This kind of system mainly focuses on the quantity of research done by teachers, reflecting the scientific research achievements from quantitative assessment in order for the scientific research management department to approve teachers' achievements on research. It is used by most of the school's scientific research departments, which is very different from the academic evaluation used internationally. The main differences are in the following areas: a. From the point of view of evaluation and methods, the level of scientific research is mainly based on peer academic evaluation, supplemented by quantitative citation factor evaluation; b. From the evaluation index, the level of evaluation is mainly through peer evaluation to examine the results of innovation, its actual value, integrity, logic and etc., as well as through the results of the citation factor for quantitative evaluations. Performance evaluation is defined according to the project level, funding, the form and quantity of results (monographs, textbooks, papers and research reports), publication level (core or general journals), award-winning level and other indirect indicators; c. From the evaluation process, the level of evaluation can be through peer evaluation to determine the scientific value of the results and academic level. Performance evaluation does not consider the content of the results themselves, only the indicators corresponding to the results to establish the evaluation system, assessing scientific research by calculating the score for various types of research; d. From the evaluator point of view, the level of evaluation requires peer experts' comments based on their expertise in the discipline. Performance evaluation is mainly score given by the evaluation index system calculated based on relevant information submitted by the researchers and combined by the scientific research management personnel. The results given by the assessment methods mentioned above show patterns of 'teachers earn points,

schools see points, and 'heroes' are defined based on points', which is the major controversial issue right now.

3. INNOVATION OF SCIENTIFIC RESEARCH AND EVALUATION OF PHILOSOPHY AND SOCIAL SCIENCE IN DOMESTIC UNIVERSITIES

3.1 Scientifically Positioning the Development Goals of Domestic Research Universities

With the continuous development of science and technology and increasing progress of higher education, colleges and universities are viewed as an important part of the national innovation system. Its scientific research plays an irreplaceable role in country's science and technology development. As an important part of scientific research management, scientific research evaluation is suitable for a long-term strategic development, improving scientific research and innovation ability, cultivating teams with academic excellence and innovative spirits, and forming an important content with sustainable competitive advantage. Therefore, a scientific and rational scientific research evaluation system has become the top priority of deepening university scientific research management reform and continuously improving the university's comprehensive competitiveness. The so-called research I university is centered on innovative knowledge dissemination, production and application in order to produce high level scientific research results and train high-level talented elite as the goal, and plays an important role on promoting development on national science and technology, economy, social and higher education (Liu & Han, 2010). According to this, the development goals of research I universities are generally like this: through the knowledge production, personnel training and social services, while promoting enhancement of national higher education level, continues to enhance national comprehensive strength and international competitiveness and participate in global competition, and ultimately plays an irreplaceable role in response to the trend of globalization of higher education. Thus, research-oriented university scientific research evaluation not only determines whether its scientific research management and scientific research evaluation is correct and reasonable, but also determines whether its development goals can be effectively achieved or not.

In our country, with universities paying more attention to the talented and implementation of strategy of rejuvenating the country through science and education, especially with '211', '985' project implementation, research I universities have also introduced different research evaluation criteria. The results of evaluation of scientific research in colleges and universities have become the important indexes to measure the level

of running a university and the annual assessment of teachers. It is also the main basis of promotion on teachers' titles, post appointments and distribution of allowances. Therefore, the basic guidance of scientific research in research I universities has become to optimize the allocation of scientific and technological resources, improve the scientific level of scientific and technological decision-making and management, improve the quality of scientific research, improve the efficiency of scientific research funding, combine scientific development goals and national goals closely, create a conducive environment and culture for original innovation, improve scientific research and innovation ability, enhance the overall strength of colleges and universities and compete for school's reputation, improve the level of discipline and use the internal power mechanism to promote long-term development of the school. However, the research methods and models of scientific research management and scientific research in domestic research universities at present are not concerned with professional development needs of teachers because of the evaluation mode of scientific research management and scientific research evaluation, in which administrative management and rewards and punishments are still the main features. The evaluation system values teachers' instrumental value over their subjectivity value. Therefore, the degree of its orientation deviates from the development goals of research I universities. Neither can it effectively promote the ability of scientific research and innovation, nor can it effectively promote academic excellence or innovative spirit of the formation of teachers.

3.2 Adaptation of the New Normality Promote the Innovation of Scientific Research Evaluation System in Universities

Scientific research itself is a complex system activity. To make it more scientific and rational, both will depend on the continuous enrichment and improvement of the scientific research evaluation theory and methods. In general, there are two common purposes of all international research evaluations at universities and research institutions: to improve the quality of scientific research and to account for the use of public funds. Therefore, the orientation of scientific research at foreign research universities is to provide the basis for the government's scientific research funding and to provide the basis and strategy for researchers to solve the major issues during the real economic and social development. This guidance not only emphasizes the need to strengthen the enhancing effect that the scientific evaluation has on the quality of scientific research in universities, actively develops high-quality basic researches, and provides more funds to higher education institutions with high-quality scientific research and lots of fundamental research results, but also guides researchers to put more energy into scientific and technological research and

research which improves the quality of scientific research. Scientific research management and evaluation should first serve the national strategy, following the national science and technology policy; purposefully guide the scientific and technological researcher closely around the national needs of research activities while taking both the overall development of school research and teachers' characteristics of scientific research into account, promoting both individual and overall development coordinately. We should not 'evaluate hero according to SSCI'; on the contrary, we should persist on following the correct value orientation, pay attention to 'Chinese theory' and 'Chinese school'. Secondly, we should analyze according to the formation of scientific research results and its real meaning, to seize the main contradiction. The choice of evaluation methods and indicators should be consistent with the objective facts, indications of the content should not be repeated, and paying attention to the realization of indicators; use expert review as the basis, and combine both qualitative and quantitative measurements. Lastly, scientific research evaluations should set promoting the ability of teachers to enhance scientific research as its basic starting point. It should be teacher-oriented and holds the teachers' development in the first place. The design of the evaluation system should respect the academic status of teachers and the academic right of pursuit of the truth and encourage teachers to actively participate in the evaluation system design with a full voice (Wang & Ma, 2009).

The purpose of scientific research is to effectively promote the development of scientific research and innovation and enhance the overall level of scientific research. Philosophy and social science research activities are multi-disciplinary, multi-level and multi-form, it is clearly inappropriate to use the same evaluation criteria on all of these research activities. Thus, methods and models of scientific research evaluation should fully respect the characteristics and differences of scientific research in different disciplines and focus on inspiring teachers to carry out scientific research activities and emphasizing the main value of teachers in scientific research activities. We should consider the period and characteristics of different disciplines and different research forms from the evaluation criteria, evaluation methods, index system to the design and development of scientific research management and evaluation procedures, and change the current annual task evaluation system into task evaluation system during the duration of employment in order to create a relaxing and free environment for teachers' scientific research activities so that the development of philosophy and social science research activities and scientific research evaluations in higher education institutions in our country is in the correct direction, and provide a well protection for school's scientific research innovation and enhancement of its overall competitiveness. At the same time, scientific research evaluation and

management should also have a certain orientation, leaning toward the impact of indicators through the weight value of changes, and lead the school scientific research activities to enhance the overall strength of scientific research. Scientific research evaluation methods and model is an organic whole. It is the prerequisite of protecting the scientific research evaluation system. Hence, the research evaluation standard, the evaluation methods and the index system should reflect and measure the object comprehensively and systematically; the scientific research evaluation should reflect the overall development goal of the school and the actual level of the scientific research development, as well as considering the characteristics of different disciplines.

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