

12-20-2021

How Could National Natural Science Foundation of China Better Guide Diversified Investment in Basic Research?

Zhengfeng LI

*School of Social Sciences, Tsinghua University, Beijing 100084, China CASAD-Tsinghua University
Research Center for Synergetic Development of Science and Society, Beijing 100084, China,
lizhf@tsinghua.edu.cn*

See next page for additional authors

Recommended Citation

LI, Zhengfeng; WU, Chenxiao; HUANG, Lu; and XUE, Wei (2021) "How Could National Natural Science Foundation of China Better Guide Diversified Investment in Basic Research?" *Chinese Academy of Sciences (Chinese Version)*: Vol. 36 : Iss. 12 , Article 9.

DOI: <https://doi.org/10.16418/j.issn.1000-3045.20211119001>

Available at: <https://bulletinofcas.researchcommons.org/journal/vol36/iss12/9>

This Operation System and Management of National Natural Science Foundation of China in New Era is brought to you for free and open access by Bulletin of Chinese Academy of Sciences (Chinese Version). It has been accepted for inclusion in Bulletin of Chinese Academy of Sciences (Chinese Version) by an authorized editor of Bulletin of Chinese Academy of Sciences (Chinese Version). For more information, please contact lcyang@cashq.ac.cn, yjwen@cashq.ac.cn.

How Could National Natural Science Foundation of China Better Guide Diversified Investment in Basic Research?

Abstract

It is one of the key tasks of science and technology in China to adjust the investment structure of basic research funds and accelerate the construction of multiple investment pattern. The National Natural Science Foundation of China (NSFC) plays an important role in leveraging diversified investment in basic research. At present, the joint funds are the main way for NSFC to guide diversified investment in basic research in China. It is a successful exploration for NSFC to meet national needs, guide diversified investment, promote resource sharing and multilateral cooperation. Nevertheless, on the one hand, the cooperation of the joint funds is limited to state-owned organizations, institutions, and enterprises, but has not been extended to private sectors. On the other hand, the management system and operation mode cannot fully reflect the inherent property of the cooperative investment of the joint funds. Thus, it is suggested that the joint funds break through the boundary between public and private sectors in terms of management philosophy to realize the transformation to the public-private partnership (PPP) cooperation model of R&D; set up a relatively independent "Joint Funds Management Center" to improve the governance system and mechanism; establish and improve the evaluation criteria and mechanism for the utilization of results that are in line with the characteristics of the joint funds. In the new stage of development, it is necessary to solve the long-standing problem that NSFC has been unable to receive donations from society. Based on the analysis that the NSFC's acceptance of social donations is a "public trust" behavior, this study figures out that NSFC should first be given the qualification and identity to accept social donations legally and in compliance. It is suggested to set up a "China Science Fund Public Trust Center" to break through the existing institutional barriers and promote the NSFC to accept social donations.

Keywords

joint funds; National Natural Science Foundation of China; basic research; diversified investment

Authors

Zhengfeng LI, Chenxiao WU, Lu HUANG, and Wei XUE

Citation: LI Zhengfeng, WU Chenxiao, HUANG Lu, XUE Wei. How Could National Natural Science Foundation of China Better Guide Diversified Investment in Basic Research? [J]. Bulletin of Chinese Academy of Sciences, 2021 (12).

How Could National Natural Science Foundation of China Better Guide Diversified Investment in Basic Research?

LI Zhengfeng^{1,2}, WU Chenxiao³, HUANG Lu⁴, XUE Wei⁵

1. School of Social Sciences, Tsinghua University, Beijing 100084, China;

2. Academic Divisions of the Chinese Academy of Sciences (CASAD)-Tsinghua University Research Center for Synergetic Development of Science and Society, Beijing 100084, China;

3. Department of Philosophy, Party School of the Central Committee of the Communist Party of China (National Academy of Governance), Beijing 100091, China;

4. School of Management and Economics, Beijing Institute of Technology, Beijing 100081, China;

5. Institutes of Science and Development, Chinese Academy of Sciences, Beijing 100190, China

Abstract: It is one of the key tasks of science and technology in China to adjust the investment structure of basic research funds and accelerate the construction of multiple investment patterns. The National Natural Science Foundation of China (NSFC) plays an important role in leveraging diversified investment in basic research. At present, joint funds are the main way for NSFC to guide diversified investment in basic research in China. This is a successful exploration for NSFC to meet national needs, guide diversified investment, and promote resource sharing and multilateral cooperation. Nevertheless, on the one hand, the cooperation of the joint funds is limited to state-owned organizations, institutions, and enterprises, and has not been extended to private sectors. On the other hand, the management system and operation mode fail to fully reflect the inherent property of the cooperative investment of the joint funds. Thus, it is suggested that the joint funds break through the boundary between public and private sectors in terms of management philosophy to transform into the public-private partnership (PPP) model of R&D; set up a relatively independent Joint Funds Management Center to improve the governance system and mechanism; establish and improve the evaluation criteria and mechanism for the utilization of results that are in line with the characteristics of the joint funds. In the new stage of development, it is necessary to solve the long-standing problem that NSFC has been unable to receive donations from society. Based on the analysis that the NSFC's acceptance of social donations is a public trust behavior, this study figures out that NSFC should first be given the qualification and identity to accept social donations legally. It is suggested to set up a China Science Fund Public Trust Center to break through the existing institutional barriers and promote NSFC to accept social donations.
DOI: 10.16418/j.issn.1000-3045.20211119001-en

Keywords: joint funds; National Natural Science Foundation of China; basic research; diversified investment

Over a long period of time in the past, the vast majority of the basic research funds in China were provided by the central government, and only a small proportion came from local governments, industries and private investors. In view of this structural problem, the central government issued the Several Opinions of the State Council on Comprehensively Strengthening Basic Research in 2018, pointing out the necessity of strengthening stable support and optimizing the investment structure in promoting basic research. The 14th Five-Year Plan for National Economic and Social Development of the People's Republic of China and the Long-Range Objectives for 2035 emphasizes the need to increase financial investment in basic research, optimize the expenditure structure, implement tax incentives for enterprises to invest in basic research, and encourage private investors to invest in basic research in various ways like donating and establishing funds.

National Natural Science Foundation of China (NSFC) plays an important role in channeling diversified investments into basic research. Since its establishment in 1986, NSFC has been actively exploring efficient ways to provide financial support for basic research projects through cooperation with various entities such as governmental departments, enterprises and local governments. At present, the joint funds are very active in attracting and integrating various resources for supporting basic research, and guiding researchers to pay attention to national strategic needs as well as regional and industrial development.

Given the challenges faced by basic research in China and China's science funds in the new era, how to enhance the function of NSFC in channeling diversified investments into basic research is still an important issue to be addressed. On the one hand, it is necessary to explore a new mechanism for the high-quality development of joint funds based on a

Received: 2021-11-26

Supported by: Emergency Management Project of National Natural Science Foundation of China (71843007); Special Project of National Natural Science Foundation of China (L1924084); Major Project of National Social Science Foundation of China (21ZDA017)

Corresponding author: LI Zhengfeng, E-mail: lizhf@tsinghua.edu.cn

Careful review of the development of joint funds in the past 30-plus years and a reflection on the nature and intrinsic characteristics of joint funds. On the other hand, in the new development stage of NSFC, there is an urgent need to create a new space for channelizing diversified investments into basic research and dredge the channels for non-state owned enterprises (SOEs) to invest in basic research, thus solving the long-standing problem that NSFC has been unable to accept donations from society.

1 The development process, effectiveness and problems of joint funds channeling diversified investments into basic research

The joint funds are the main way for NSFC to channel diversified investments into basic research. It is a successful exploration for NSFC to meet national needs, guide diversified investment, promote resource sharing and encourage multilateral cooperation.

1.1 Brief review of the development process of joint funds

As early as the middle and late 1980s, NSFC began to carry out joint funding for research projects through various forms of cooperation with local governments, scientific research and industry departments and large- and medium-sized SOEs^[1,2]. In 2001, NSFC issued the Several Opinions on Joint Funding, which is the first independent NSFC document about joint funding. This document contains a series of stipulations on various issues and management procedures related to joint funding, including establishment of the conditions for joint funding, confirmation of joint fund partners, as well as project review, project management, fund management and result management. Since then, the joint funds have been incorporated into the overall planning of NSFC as an integral part.

In 2015, NSFC issued the Measures for Management of Joint Fund Projects of the National Natural Science Fund of China^①. This document not only emphasized the need to guide and integrate various resources for basic research, but also highlighted the important role of joint funds in enhancing the capabilities of regions, key fields and industries to carry out independent innovation, so as to meet the urgent needs of the corresponding regions, industries and enterprises.

In 2018, NSFC issued the Plan for Carrying out Pilot Work

of Joint Funds by the National Natural Science Fund of China in the New Era. This document further standardized and improved the management rules of joint funds, which promoted the formation of an advanced joint fund funding system with high funding efficiency^[3]. The Plan mainly includes: With regard to the funding system, it is planned to set up a regional innovation & development joint fund and an enterprise innovation & development joint fund; with regard to fund allocation, it is stipulated that NSFC and all funding partners jointly provide the fund for each research project according to a fixed ratio (the overall investment ratios of NSFC to local governments, enterprises and industry departments are 1:3, 1:4 and 1:2, respectively); regarding management mode, it is planned to strengthen the management of various joint funds, specifically, applying a uniform set of rules for fund use, release of project guidelines, project review procedures and project management.

By the end of 2020, 20 provinces, autonomous regions and municipalities have joined the joint funds for regional innovation & development in the new era. In addition, six enterprises have joined the joint funds for enterprise innovation & development, and six industry departments have set up joint funds. As a result, the mechanism and pattern of NSFC channeling diversified investments into basic research have basically taken shape^②. Since 2011, the scale of joint funding expenditure has been expanding year after year (Figure 1). The direct expenditure on joint funding reached CNY 369 million in 2011, and the figure exceeded CNY 1 billion in 2016. The direct expenditure of joint funds increased to CNY 2.388 billion in 2020, which accounts for 8.44% of the total direct fund expenditure of NSFC in 2020 (CNY 28.303 billion)^③ and is about 6.5 times the figure in 2011.

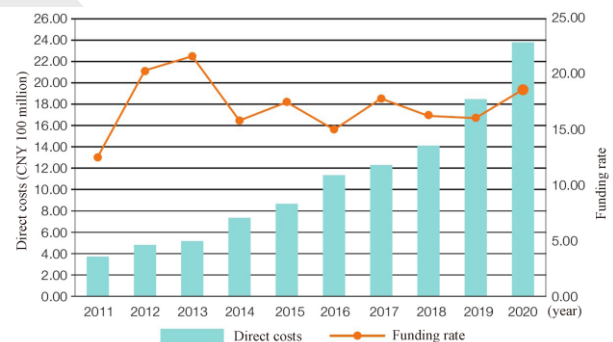


Figure 1 Changes in direct costs and funding rates of joint funds from 2011 to 2020

Data source: annual report of the National Natural Science Foundation of China (<http://www.nsf.gov.cn/publish/portal0/tab535/>)

① National Natural Science Foundation of China. Notice on Printing and Distributing the Measures for Management of Joint Fund Projects of National Natural Science Foundation of China (2015-09-30)[2021-11-25]. <https://www.nsf.gov.cn/publish/portal0/tab442/info61372.htm>.

② National Natural Science Foundation of China. 2020 Annual Report (I. Progress in Deepening Reform of National Natural Science Foundation of China) [2021-11-25] <http://www.nsf.gov.cn/publish/portal0/ndbg/2020/01/info81327.htm>.

③ National Natural Science Foundation of China. 2020 Annual Report (II. Overall Situation of Financial Budget Expenditure and Grants). [2021-11-25] <http://www.nsf.gov.cn/publish/portal0/ndbg/2020/01/info81328.htm>.

1.2 Effectiveness and problems of joint funds

While guiding the basic research investments of governmental departments, industries, local governments and enterprises, the joint funds are also expanding the social functions of science funds. (1) The joint funds have opened up a new path for NSFC to support demand-oriented basic research, and established and promoted the development of a new mechanism for industry-university-research cooperation. The horizontal alliance with industries and governmental departments widens the avenue of promoting the high-quality development of industries using the fruit of basic research; the vertical alliance with local governments highlights the role of science funds in promoting local innovation and development. (2) The joint funds have opened up a new avenue for promoting sharing of scientific infrastructures. For example, the joint funds for promoting the availability of large scientific research infrastructures jointly established by NSFC and Chinese Academy of Sciences not only promotes sharing of large scientific research facilities within scientific community, but also greatly improves their availability^[4].

It has been proved in practice that as a special type of science funds, joint funds represent a diversified funding model for basic research with distinct Chinese characteristics, playing an important role in channeling diversified investments into basic research according to the national needs.

However, joint funds have three major deficiencies: (1) The funding partners are limited to entities of state-owned nature, including governmental departments, industries, local governments and large- and medium-sized enterprises. The private entities like private enterprises are not included. (2) The management system and operation mode of the joint funds are still confined in the conventional framework of science fund management, thereby failing to fully reflect the characteristics of the joint funds. (3) The review and assessment mechanism and indices of the joint funding projects as well as utilization of the research results cannot fully meet the requirements of the funding partners such as governmental departments, local governments and enterprises. Thus the joint funds are not effective in boosting the endogenous motivation of investors.

2 Deepening the reform of joint funding system based on the essential attributes of joint funds

The fact that joint funds can achieve outstanding results indicates that the advantages of NSFC in talents and institutions can be translated into important resources for channeling diversified investments into basic research. The deficiencies of joint funds are mostly related to the failure to fully understand and reflect their essential attributes and intrinsic characteristics.

The essence of joint funds is cooperative investment. Joint

funds are jointly established by NSFC and entities such as governmental departments, industries, local governments and enterprises. Although joint funds are an important part of NSFC, it is different from the traditional science funds which only receive money from the government. In essence, it is a special fund for cooperative investment.

Motivation of funding partners for cooperation. The reason why governmental departments, industries, local governments and enterprises have the willingness and enthusiasm to cooperate with NSFC in funding basis research can be largely attributed to three aspects: (1) NSFC has gathered together an elite force of scientific research. The partnership with NSFC allows the funding partners to make use of competent researchers conveniently and efficiently as well as organize basic research surrounding their urgent needs. (2) With the endorsement of NSFC with its social reputation, joint funds can make full use of the brand effect and platform advantages of NSFC to reduce the transaction cost between funding partners and executive entities of the scientific research projects, dispersing the investment risk of basic research. (3) Backed by the standardized and efficient operation mechanism of NSFC in resource allocation, bidding and competition, project selection and quality control, joint funds can improve the availability of the funds.

The particularities of joint funds. In addition to making use of the advantages of NSFC in talents and institutions as well as its brand effect, joint funds with the essential attribute of cooperative investment have some characteristics that set them apart from the funds that only receive money from the nation's coffer. On the one hand, joint funds involve multiple investors. As different investors have different interests and demands, public interests and the interests of governmental departments, industries, local governments and enterprises will inevitably form a complex web of relations. On the other hand, the management mode and operation mechanism of the joint funds must meet the intrinsic requirement of cooperative investment; that is, a good balance should be struck between pursuing the maximization of public interests and protecting the rights and interests of the investors. Only in this way can joint funds develop continuously and perform their due functions.

At present, the institution design and management mode of joint funds are still not fully compatible with their essential attribute, which is cooperative investment. It is necessary to deepen the reform of the joint funding system based on the essential attribute of joint funds. On the basis of the above analysis, this paper proposed three suggestions.

2.1 Breaking through the public-private boundary in management concept and management mode, and constructing a public-private partnership (PPP) model for R&D

At present, the funding partners of joint investment projects are limited to entities of state-owned nature, including governmental departments, industries, local governments and

enterprises. This is only a simple way to evade the conundrum of how to treat the public-private relationship, which is not conducive to maximizing the national or public interests. This exclusive policy also bars private entities from taking part in the joint funding. In fact, some private entities are willing to invest in basic research and their investments can promote the public interests. Therefore, there is an urgent need to break through the public-private boundary in the management concept and management mode of joint funds, and realize the transformation to the R&D PPP mode.

International experience shows that the R&D PPP mode is an important vehicle for private entities to participate in scientific research^[5]. R&D PPP mode refers to a mode of funding for R&D projects with the participation of public agencies and private entities. Under any formal relationship or arrangement jointly established by the public and private participants, the participants jointly make decisions on investing scarce resources such as capital, personnel, facilities and information on an R&D project, in the hope of achieving a specific goal in a certain field of science, technology and innovation^[6]. Under this cooperation mode, both public and private participants can achieve the dual goals of maximizing national interests as well as advancing their own interests under the institutional norms of joint investment, risk sharing and income sharing. The key points of the institution design of R&D PPP include: (1) The government plays the leading role, and all entities participate in management as equal investors; (2) a stable and formal organization structure is established for joint R&D; (3) diversified investment mechanisms in various forms are established to fund basic research projects in different ways including government appropriation, direct investment of enterprises, and membership fee and project fee charges; (4) an incentive compatible result sharing mechanism is established to handle affairs related to intellectual property rights and distribution of income resulted from commercialization of research results. By shifting to the R&D PPP mode, NSFC can expand the space for cooperative investment and attract private enterprises to participate in joint funds. Additionally, it is necessary to further standardize and improve the institution system of the joint funds, and thus lay a stable and solid foundation for maintaining their sustainable development and giving full play to their functions.

2.2 Establishing a relatively independent joint funds management center to improve the governance system and management mechanism of the joint funds

At present, the interdisciplinary research division of the planning and policy bureau of NSFC is responsible for the management of joint funds. The lack of relatively independent organization for joint funds management has brought about some problems and challenges, which makes it difficult to fulfill the increasingly heavy duty of fund management and

hinders the effort of forming a consummate governance structure and deepening the reform of joint funds. Therefore, there is an urgent need to set up a relatively independent joint funds management center (hereinafter referred to as management center), so as to establish a governance system that suits the nature of joint funds, improve the management mode for the achievement of their functions, and strengthen their specific management.

Following the principle that the government plays the leading role, and all entities participate in management as equal investors under the PPP mode as well as the guidance of the Regulations on the National Natural Science Fund of China and relevant management documents of joint funds, we suggest that NSFC and the funding partners jointly form a joint-funds management committee (hereinafter referred to as the management committee) and assign the committee the responsibility of making decisions on important matters like identifying target fields of funding, issuing project guidelines, approving funding plans, and establishing/terminating joint fund projects. The management committee will be composed of the heads of the participating entities. The management center, affiliated to NSFC, will act as an executive organ for the management of joint funds, and can also serve as the secretariat of the management committee. The person in charge of the management center shall be appointed by NSFC, and the members may include NSFC managers, employees of funding partners and dedicated management personnel.

Considering that the management of joint funds is becoming increasingly complex and onerous, it is necessary to take advantages of the particularities of the joint funds to break the limitations of the employment system of public institutions, innovate the existing employment mode for diversification, and promote the formation of a more flexible human resource system. The specific measures include: (1) negotiate with the funding partners to arrange a temporary transfer of appropriate personnel. The transferred employees can work as the staff of the management center during the transfer period, and their employment relationship with the original organization will be retained; (2) stipulate clearly in the cooperation agreement with each funding partner that a certain amount of operation management fund shall be withdrawn from the joint investment fund according to a certain proportion. This proportion can be higher than the upper limit set for the funding projects in which all funds are provided by NSFC. The management fund is used for the routine operation of the management center, especially the recruitment of professional managers required for the management of joint funds, including recruiting experts familiar with the matters of joint funding to serve as the temporary directors of joint fund projects. On this basis, the next step is to introduce the professional manager system, build a professional joint fund management & operation team, and establish a market-oriented payment incentive mechanism.

2.3 Improving the review criteria and result utilization mechanism in line with the characteristics of joint funds

Joint investment, risk sharing, joint management and income sharing are the core principles of joint funds to achieve win-win cooperation in multiple funding partners.

(1) The interests and demands of the funding partners should be fully respected. The design of the assessment index system of the joint funds should reflect the differences between joint funds and conventional science funds. The emphasis should be placed on whether the project under review represents a breakthrough in solving a certain scientific problem and can effectively meet the urgent needs of some regions, industries and enterprises. Furthermore, it is necessary to promote the fusion of science, technology and engineering, and realize coordinated development of basic research, applied research and technological innovation.

(2) The function of joint funds as a public service and management platform for basic research should be well fulfilled. To strengthen the connection between knowledge innovation and technological innovation, a whole-chain standardized quality monitoring and regulation management system should be established to regulate all aspects of the joint funds including selection of funding partners, bidding and competition, quality control, intellectual property rights and resource sharing. It is necessary to promote sharing of research results between different joint fund projects, encourage the funding partners to commercialize the research results of joint fund projects, and promote the implementation and spreading of the research results.

3 Breaking through the institutional and organizational obstacles blocking social donation channels of NSFC

In theory, direct fund allocation from the nation's coffer, funds from funding partners and social donations are the three funding sources of NSFC. However, NSFC has been unable to accept social donations for various reasons. There is a need to further strengthen the role of NSFC in guiding and leveraging social forces to invest in basic research in the new era. In addition to improving the existing joint fund system, it is necessary to actively explore a new channel for NSFC to accept social donations. In fact, according to the Notice on the Establishment of the National Natural Science Foundation of China issued by the State Council the People's Republic of China in 1986, NSFC was entitled to accept donations from organizations and individuals in China and abroad from the very beginning of its establishment. However, up to now, due to some ideological problems and institutional obstacles, NSFC has been strait-jacketed in terms of fund source and therefore has been unable to leverage social donations to support basic research.

With regard to social donations for scientific research, the Law of the People's Republic of China on Scientific and Technological Progress, revised in 2007, stipulates that China encourages organizations or individuals at home and abroad to donate property and establish science and technology funds to support scientific and technological research and promote the popularization of science and technologies. In the same year, the State Council issued the Regulations on the National Natural Science Fund of China, which not only made it clear that NSFC mainly receives money from the central government, but also stressed that China encourages natural persons, legal persons and other organizations to donate fund to NSFC. The above laws and regulations provide a legal basis for NSFC to accept social donations.

However, these laws and regulations do not provide practical guidance on this issue, especially the method to determine the legitimacy of accepting social donations in the administrative system. In addition, there are many institutional obstacles blocking the channels of accepting social donations.

Therefore, the key to promoting NSFC's acceptance of social donations lies in how to better make use of the existing laws and regulations. On the basis of straightening out the legal and authority-responsibility relationships between all parties involved in the process of NSFC receiving social donations, it is possible to formulate the right organizational form and institution design that not only meets the requirements of relevant laws and regulations, but also can give full play to the role of social donations. Therefore, this paper analyzed the issue of NSFC receiving social donations from three angles and proposed some suggestions.

3.1 What is the nature of NSFC's acceptance of social donations?

According to the Trust Law of the People's Republic of China (hereinafter referred to as the Trust Law) enacted in 2001 and the Charity Law of the People's Republic of China (hereinafter referred to as the Charity Law) promulgated in 2016, the NSFC's acceptance of social donations is a public trust behavior. The social donations used to support basic research can be defined as public welfare donations or charitable donations. The natural persons, legal persons and other social organizations providing such donations are the clients supporting basic research. NSFC can accept social donations as a trustee and form a charitable trust or public trust relationship with the donors (clients) for the purpose of supporting basic research. Therefore, the act of NSFC accepting social donations constitutes a public trust behavior in essence.

3.2 Why has NSFC failed to make a breakthrough in accepting donations from individuals, enterprises and other social entities for a long time?

When social entities make donations to NSFC, they will encounter two key problems: (1) Individuals and enterprises

cannot find the information indicating that NSFC is a legitimate donation receiver; (2) when the financial department of NSFC accepts donations, it can only issue receipts of public institutions, making it difficult for the donors to enjoy relevant tax deductions or exemptions. Therefore, the crux of the problem is that NSFC has not really obtained the qualification to legally accept social donations.

According to the Welfare Donations Law of the People's Republic of China on Public Welfare Undertakings, social public welfare organizations and nonprofit public welfare institutions can accept donations. According to the Charity Law, the trustee of a charitable trust can be a charitable organization or trust company trusted by the client, and the charitable organization can be a foundation, social organization, social service institution, etc. NSFC itself has the organizational form of foundation, but whether NSFC, a public fund management organization established by the state is legitimate to directly become a charitable organization approved by the Ministry of Civil Affairs of the People's Republic of China is a question worthy of discussion. According to the Charity Law, foundations set up before the promulgation of the law can make an application to the department of civil affairs for being recognized as a charitable organization, and the department of civil affairs shall make a decision within 20 days from the date of accepting the application. However, if NSFC makes a registration application to the department of civil affairs as a charitable organization, this may lead to an identity contradiction; that is, the identity of charitable organization is not compatible with the nature of the public fund management organization established by the state.

A feasible route of breakthrough is to establish a non-profit social service institution with the qualification to accept social donations, affiliated to NSFC. The establishment of this charitable organization will pave the way for NSFC to legally accept social donations and then carry out public fundraising. Examples of such kind of charitable organizations that are sponsored, supported and supervised by government agencies include China Education Development Foundation (CEDF) and China Foundation for Poverty Alleviation (CFPA). CEDF is a national public foundation that is sponsored by the Ministry of Education and the Ministry of Finance of the Republic of China and is registered with the Ministry of Civil Affairs. It was officially put into operation on March 30, 2006. Its purpose is to use the funds raised in China and abroad to support students with financial difficulties to complete their studies in school, and help local governments to solve the special difficulties encountered in the process of education reform. Founded in 1989, CFPA is one of the largest charitable organizations in the field of poverty alleviation and rural development in China. It is registered with the Ministry of Civil Affairs and managed by the Ministry of Agriculture and Rural Areas.

3.3 How does NSFC establish a nonprofit social service institution that can accept social donations?

(1) The China Science Fund Public Trust Center should be set up. Considering that the social service institution sponsored, supported and supervised by NSFC will engage in public trust activities after receiving social donations, it is suggested that the institution be named China Science Fund Public Trust Center (hereinafter referred to as the trust center). The relationship between NSFC and the trust center will be similar to the relationship between the Ministry of Agriculture and Rural Areas and CFPA. In other words, the trust center has the status of independent legal person and operates under the supervision of NSFC.

(2) The organizational structure and operation mechanism of the trust center will be constructed according to relevant laws and regulations, and the trust center will complete the required registration. The organizational structure and operation mechanism of the trust center shall be designed and refined according to relevant laws and regulations. With the approval of relevant leaders of the State Council and the Ministry of Science and Technology, the trust center can make an application to the department of civil affairs for registration, and become a charitable organization engaging in public trust activities after obtaining the approval. According to the Charity Law, the trust center can apply to the department of civil affairs for public fundraising qualification two years after the registration.

(3) The relationship between NSFC and the trust center should be clarified. The chief (legal representative) of the trust center can be appointed by NSFC. The trust center operates under the leadership of NSFC and utilizes the platform and mechanisms established by NSFC to carry out public trust services, but it has a certain degree of independence in operation and management as stipulated by relevant laws and regulations including the Charity Law. NSFC is mainly responsible for managing the state-invested funds and joint funds, while the trust center mainly manages the social donations for the purpose of supporting basic research. The public trust services that the trust center can provide include: (1) directly accepting social donations for the purpose of supporting basic research, and legally using social donations to fund basic research projects according to the wishes of the clients and the tenet of providing public services for the society; (2) accepting the entrustment to manage the funds of other foundations in China and abroad for supporting scientific research in China, and providing professional technical services that can help other social funds to invest social donations into basic research.

(4) After the trust center is qualified to legally accept social donations, individual or enterprise donors can enjoy the rights and benefits stipulated by relevant laws and regulations. For example, the donors can enjoy certain tax deductions or exemptions, or obtain the naming right of the research project supported by the donated funds through

negotiation on the premise of conforming to relevant laws and regulations. These rights and benefits will incentivize more individuals and enterprises (including some SOEs) to provide social donations for basic research. The use of the funds from social donations can expand to other public welfare areas, such as supporting the scientific research activities in underdeveloped areas, and facilitating the research activities that can promote environment protection and improve the health level of the people.

References

- 1 国家自然科学基金委与城乡建设部联合资助一批科学基金项目. China Daily, 1987-01-13 (03) (in Chinese).
- 2 LIU Z Y, HAN Y, ZHAO X W. Problems in the co-funding activities of NSFC and policy suggestions. Bulletin of National Natural Science Foundation of China, 2003, 27 (6): 354–359 (in Chinese).
- 3 LI J H. Deepen the reform of the National Natural Science Fund to play the fundamental and leading role in the national innovation system. Bulletin of National Natural Science Foundation of China, 2019, 33 (3): 209–214 (in Chinese).
- 4 LI H H, LU Y, ZENG G. A review of the fund support and management of Joint Research Fund of large-scale scientific facility for ten years. Bulletin of National Natural Science Foundation of China, 2019, 33 (4): 367–374 (in Chinese).
- 5 XUE W, WEI S J. Research on supporting policies for China's social capital investment in scientific research in the new era. China Soft Science, 2021, (5): 59–69 (in Chinese).
- 6 OECD. Public/private partnerships for innovations//OECD Science, Technology and Industry Outlook 2004. Paris: OECD Publishing, 2005: 87–111.6 OECD. Public/private partnerships for innovations//OECD Science, Technology and Industry Outlook 2004. Paris: OECD Publishing, 2005: 87–111.

(Translated by PU H)



LI Zhengfeng, professor and PhD supervisor of the Department of Sociology, School of Social Sciences, Tsinghua University; director of the Research Center for Coordinated Development of Science and Society, Tsinghua University and Chinese Academy of Sciences; deputy director of the Research Center for Scientific and Technological Development and Governance, Tsinghua University and China Association for Science and Technology. His key research fields are development strategy and policy of science and technology, social research of science, scientific culture and science & technology ethics. E-mail: lizhf@tsinghua.edu.cn