

Analysis and Suggestions on the Implementation of Xizang Autonomous Region-level Science and Technology Innovation Voucher Policy

Wenya Wang

Xizang Autonomous Region Technology Entrepreneurship Service Center, Xizang, 850000, China

ABSTRACT

To enhance the level of scientific and technological innovation in the Xizang Autonomous Region, improve enterprises' product R&D capabilities, and guide technology-based small and medium-sized enterprises, innovation and entrepreneurship enterprises and teams to utilize scientific and technological resources such as universities, research institutes, and science and technology service institutions, the Xizang Autonomous Region has implemented the regional-level science and technology innovation voucher policy since 2019. After several years of implementation, it is currently in the in-depth exploration stage. This paper analyzes the management mode of Xizang Autonomous Region-level science and technology innovation vouchers from the aspects of operation mechanism, government agencies and their responsibilities, support objects, issuance and redemption procedures, and supervision and management. It summarizes the effectiveness of the Xizang Autonomous Region-level science and technology innovation voucher policy in improving the utilization efficiency of government science and technology funds since its implementation. In view of the problems found in the implementation process, it specifically analyzes the reasons from the aspects of the publicity of the science and technology innovation voucher policy, the review of innovation achievements, and the issuance and redemption cycle of science and technology innovation vouchers, and then puts forward corresponding countermeasures and suggestions. The purpose is to further optimize the implementation effect of the Xizang Autonomous Region-level science and technology innovation vouchers and promote the development of enterprises.

KEYWORDS

Xizang; Regional-level science and technology innovation vouchers; Policy implementation; Scientific and technological innovation services; Small and medium-sized enterprises

1. INTRODUCTION

Innovation vouchers are negotiable securities issued free of charge by the government to technology-based small and medium-sized enterprises for purchasing technological innovation services. Its operation mode is: the government issues innovation vouchers to enterprises, enterprises use the innovation vouchers to purchase technological innovation services from voucher-receiving institutions, and then the voucher-receiving institutions take the vouchers to the government departments for redemption. The starting point of the government's implementation of the innovation voucher system is to promote the technological innovation of small and medium-sized enterprises in the region, especially micro-enterprises, under the premise of a universal benefit system, thereby driving the high-quality development of the regional economy [1]. Many enterprises believe that innovation vouchers, which are easy to apply for, convenient to use, have few thresholds, and reduce innovation costs, are a major driving force for enhancing enterprise innovation [2].

The innovation voucher system first appeared in the Netherlands in 2004. Subsequently, some European and Asian countries followed suit. Domestically, Suqian City, Jiangsu Province took the lead in practicing the innovation voucher policy in September 2012. More and more provinces and cities, such as Beijing, Shanghai, Shenzhen, Wuhan, Jiangsu, Guangdong, Zhejiang, Guizhou and more than 30 provinces (autonomous regions, municipalities directly under the Central Government, Hong Kong and Macao), have implemented the innovation voucher system. In today's China, where the market plays a decisive role in resource allocation, the government functions are transformed, and the main position of enterprises in technological innovation is established, although the innovation voucher system has developed rapidly, the practices in different provinces vary greatly, but generally it is still in the exploration and testing stage. In response to the national call, Xizang has also actively explored the formulation and implementation of the science and technology innovation voucher system.

The implementation of the science and technology innovation voucher policy in the Xizang Autonomous Region started later than other provinces in China. In March 2019, the Science and Technology Department of the Xizang Autonomous Region issued the Notice on Printing and Distributing the Measures for the Administration of Science and Technology Innovation Vouchers in the Xizang Autonomous Region (Trial) (Zangke Fa [2019] No. 76), and then revised and improved the current Notice on Printing and Distributing the Measures for the Administration of Science and Technology Innovation Vouchers in the Xizang Autonomous Region (Trial) (Zangke Fa [2022] No. 181). Up to now, the implementation of the regional-level science and technology innovation voucher policy is still in in-depth exploration. Therefore, summarizing the implementation effects of the innovation voucher policy, analyzing the problems encountered in the implementation process, and putting forward policy optimization suggestions can not only further promote the implementation of the science and technology innovation voucher policy in the Xizang Autonomous Region, but also provide data support and reference for the government and relevant departments.

2. POLICY IMPLEMENTATION

Innovation vouchers are a kind of government subsidy implemented by the state to support technology-based small and medium-sized enterprises, innovation and entrepreneurship enterprises and teams to carry out scientific and technological innovation and entrepreneurship activities and stimulate innovation vitality. Similar to shopping vouchers used by citizens in supermarkets, they are used to deduct part of the expenses in the process of enterprise innovation, and can reduce the innovation input costs of technology-based small and medium-sized enterprises, innovation and entrepreneurship enterprises and teams [3]. The Measures for the Administration of Science and Technology Innovation Vouchers in the Xizang Autonomous Region (Trial) covers the operation mode, institutions and responsibilities, support objects, application, issuance, use and redemption procedures, supervision and management of science and technology innovation vouchers, and formulates matching implementation rules.

2.1. Operation Mode

The operation mode of Xizang Autonomous Region-level science and technology innovation vouchers can be simply understood as the application of service institutions, the application and issuance of innovation vouchers, and the use and redemption of innovation vouchers. The implementation of the science and technology innovation voucher policy involves relevant government departments, service institutions, technology-based small and medium-sized enterprises, and so on[4]. First, service institutions apply to government departments for recognition, and those that meet the relevant requirements are selected; second, enterprises apply to government departments for science and technology innovation vouchers, and after government review, the vouchers are issued to eligible enterprises; third, enterprises can use the innovation vouchers to offset part of the service

fees after signing a science and technology service contract with service institutions. As shown in Figure 1 below.

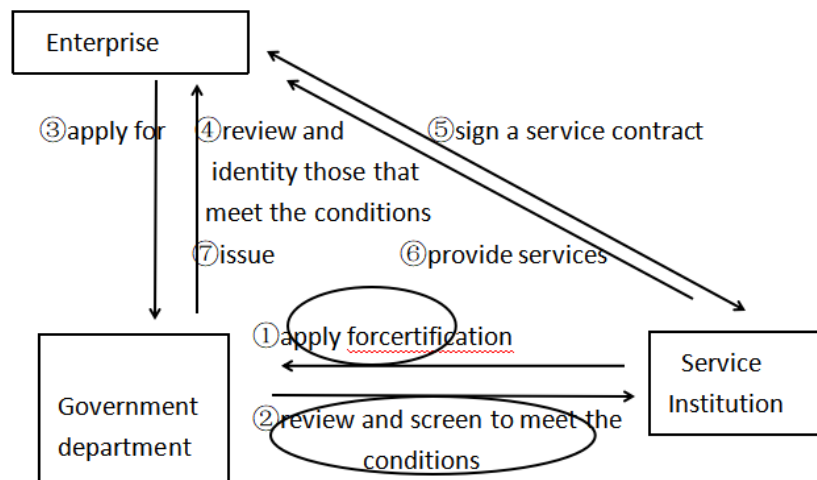


Figure 1. Operation Process of Xizang Autonomous Region-level Science and Technology Innovation Vouchers

2.2. Support Objects

The support objects of Xizang Autonomous Region-level science and technology innovation are technology-based small and medium-sized enterprises and innovation and entrepreneurship teams that are legally registered in our region and have independent legal person qualifications. The scope of services includes professional science and technology services and comprehensive science and technology services such as research and development, technology transfer, inspection, testing and certification, business incubation, intellectual property, science and technology consulting, science and technology finance, and popularization of science and technology.

2.3. Issuance and Redemption

The Science and Technology Department of the Xizang Autonomous Region is responsible for formulating policies, providing decision-making guidance, annual budgeting, supervision and approval, redemption and allocation, performance evaluation of regional-level innovation vouchers, and studying and determining major issues in the implementation of innovation vouchers. The Xizang Autonomous Region Technology Entrepreneurship Service Center is responsible for the issuance and redemption of science and technology innovation vouchers. Enterprises register and apply for science and technology innovation vouchers through the Xizang Autonomous Region Innovation and Entrepreneurship Carrier Service Management Platform (referred to as the Innovation and Entrepreneurship Platform). The Xizang Autonomous Region Technology Entrepreneurship Service Center organizes experts for review, and after approval, the Innovation and Entrepreneurship Platform redeems them, as shown in Figure 2.

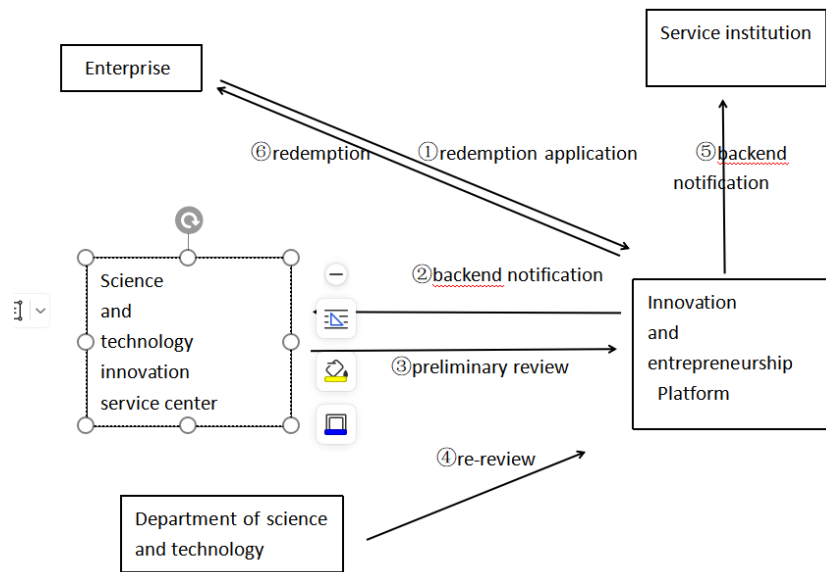


Figure 2. Redemption Process of Xizang Autonomous Region-level Science and Technology Innovation Vouchers

2.4. Supervision and Administration

The Science and Technology Department of the Xizang Autonomous Region shall assess the work performance of innovation voucher service management institutions in terms of innovation voucher work every year. The Science and Technology Innovation Service Center of the Xizang Autonomous Region is responsible for assessing the service performance of innovation voucher service institutions, as shown in Figure 3 below.

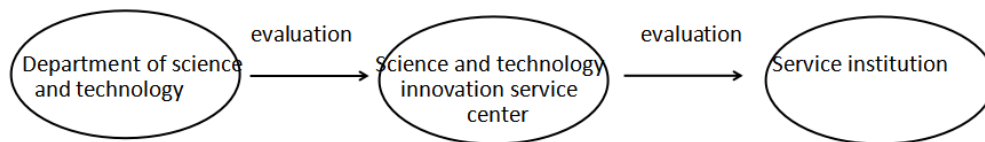


Figure 3. Assessment and Management Process of Xizang Autonomous Region-Level Science and Technology Innovation Vouchers.

3. POLICY IMPLEMENTATION EFFECTS

Since the implementation of Xizang Autonomous Region-level science and technology innovation vouchers in 2019, after several years of implementation, the policy has played a significant role in guiding regional technology-based small and medium-sized enterprises, innovation and entrepreneurship enterprises and teams (including technology-based start-ups) to utilize scientific and technological resources such as universities, research institutes and science and technology service institutions, improving enterprises' product R&D capabilities, promoting close integration of industry, education and research, and enhancing enterprises' development capabilities, providing relevant data support and reference for local governments and relevant departments in decision-making.

3.1. Cumulative Issuance and Redemption

From 2020 to 2023, a total of 19.84 million innovation vouchers were issued, and 17.75 million were redeemed, with a redemption-issuance ratio of 89.5%. From 2020 to 2023, 358 enterprises received the vouchers, and 325 completed the redemption, with a redemption-issuance ratio of 90.8%. The specific situation is shown in Figure 4 below.

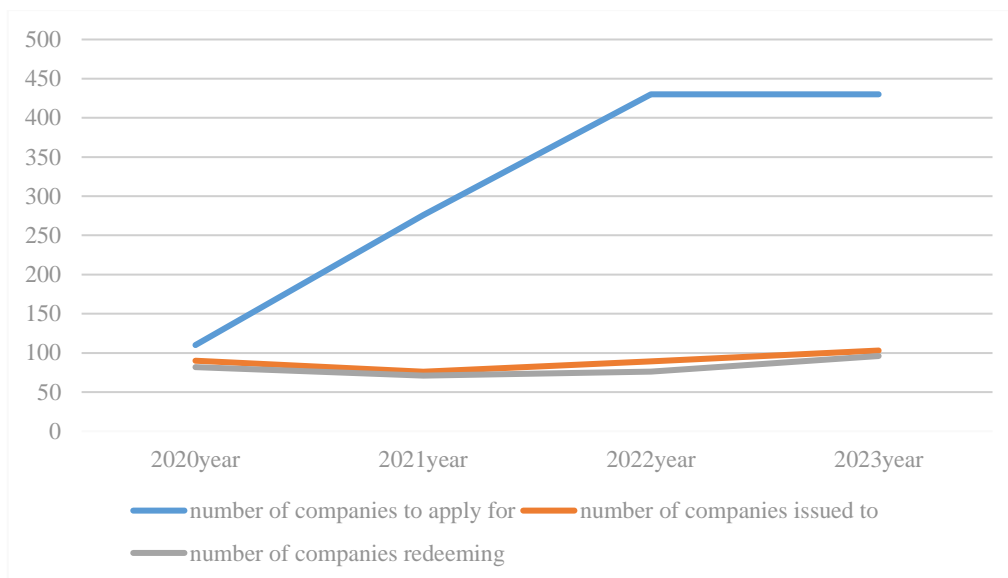


Figure 4. Changes in the Number of Enterprises Receiving and Redeeming Xizang Autonomous Region-level Science and Technology Innovation Vouchers from 2020 to 2023

3.2. Promoting Close Integration of Industry, Education and Research

Technology-based small and medium-sized enterprises, innovation and entrepreneurship enterprises and teams in the Xizang Autonomous Region are relatively scattered, with weak innovation capabilities, and are less competitive than large enterprises in terms of scientific and technological resources. Thanks to the implementation of Xizang's science and technology innovation voucher policy, these enterprises can quickly and effectively utilize scientific and technological resources such as universities, research institutes and science and technology service institutions, and promote the improvement of scientific and technological innovation capabilities. By the end of 2023, the total number of science and technology service institutions was 69, as shown in Figure 5.

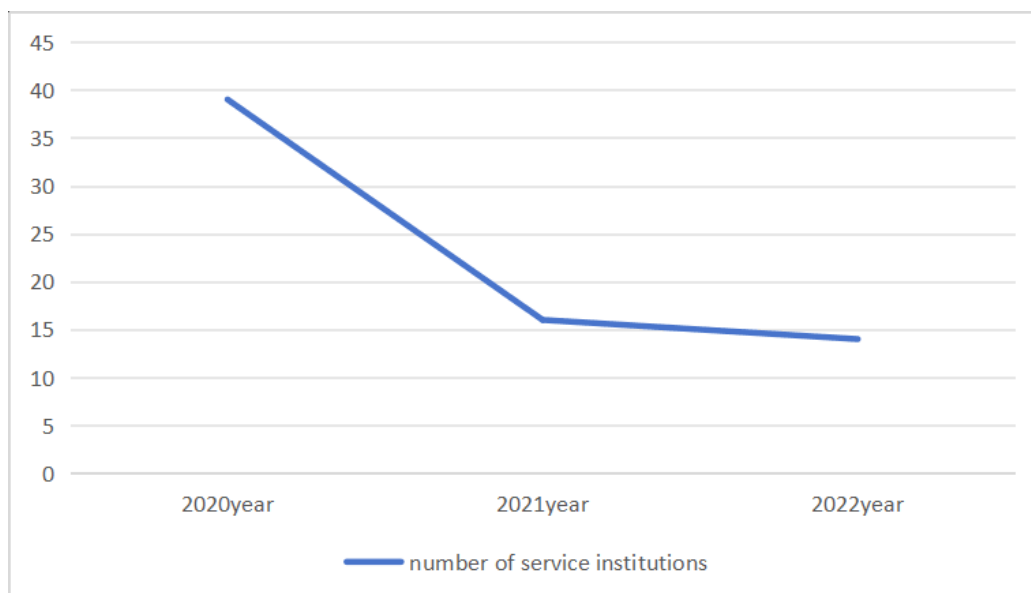


Figure 5. Newly Added Number of Service Institutions from 2020 to 2022

3.3. Cumulative Achievements and Effects

The implementation of the Xizang Autonomous Region-level science and technology innovation voucher policy has exerted a positive and significant impact on cultivating high-tech enterprises and

technology-based small and medium-sized enterprises. It has been used for policy consultation and application for government projects such as national-level technology-based small and medium-sized enterprises and high-tech enterprises, with a cumulative total of 63 times, and a cumulative total of 200 times for scientific and technological consultation and training. At the same time, it has driven supporting self-raised R&D investment of 9.84 million yuan from small and medium-sized enterprises. Other major accumulated scientific and technological achievements include 477 utility model patents, 150 invention patents, 111 appearance patents, 191 trademark registrations, 291 software copyrights, 184 design services, 59 new products and system developments, and 80 inspection and testing reports and certifications, etc.

4. PROBLEMS AND CAUSE ANALYSIS

4.1. Inadequate Publicity of Innovation Vouchers

There is a single way of publicity. Many technology-based small and medium-sized enterprises in the region have not heard of science and technology innovation vouchers, let alone understand the implementation process of the innovation voucher policy. The publicity of regional-level science and technology innovation voucher policies is mainly concentrated on official websites such as the Xizang Science and Technology Department website and the Innovation and Entrepreneurship Platform, which may lead to relevant enterprises not being able to access the science and technology innovation voucher policies in a timely and effective manner. Policy interpretation helps enterprises understand the background, purpose, operation mode and implementation rules of the policy. The interpretation of Xizang Autonomous Region-level science and technology innovation voucher policies has problems such as few interpretation channels and inadequate policy refinement. Some enterprises fail to apply for the vouchers because they do not understand the content of the management measures for science and technology innovation vouchers.

4.2. Difficulty in Reviewing Innovation Achievements

In the implementation of the innovation voucher policy, there are often situations where the number of experts is small, the time is short, and the workload is heavy. Moreover, experts can only judge whether the innovation achievements meet the policy requirements based on the written materials submitted by enterprises to the Innovation and Entrepreneurship Platform, which may inevitably lead to unobjective review results.

4.3. Long Issuance and Redemption Cycle

The Xizang Autonomous Region-level science and technology innovation vouchers are applied for, issued, used and redeemed once a year, and the valid date of the issued vouchers is until December 31 of the current year. For example, there was a case where the innovation vouchers issued in 2023 were not redeemed until October 2024, which affected the enthusiasm of enterprises to apply for science and technology innovation vouchers.

5. SUGGESTIONS

5.1. Strengthen the Publicity of Innovation Vouchers

Expand the publicity media and make full use of new media channels to strengthen the publicity and policy interpretation of innovation vouchers. Xizang Autonomous Region-level science and technology innovation vouchers can be available on platforms such as Douyin and Xiaohongshu to expand their influence and regularly carry out live courses on interpreting innovation voucher policies.

5.2. Refine Management Measures

The current management measures are too concise, and some conceptual boundaries are vague and difficult to understand. The implementation rules of innovation vouchers should be continuously revised and improved.

5.3. Expand the Expert Team and Extend the Review Time

In the face of problems such as the heavy workload of science and technology innovation vouchers, experts in different fields should be recruited for different professions, the review time should be increased, and two rounds of scoring should be conducted to ensure that the review results are more objective.

5.4. Shorten the Redemption Cycle

The existing science and technology innovation vouchers are almost carried out once a year at a unified time. It can be appropriately adjusted to apply for and redeem once every six months.

6. CONCLUSION

This paper demonstrates the significant role of Xizang Autonomous Region-level science and technology innovation voucher policies in reducing the innovation costs of technology-based small and medium-sized enterprises, innovation and entrepreneurship enterprises and teams, promoting the integration of industry, education and research, and improving the level of innovation capability from the perspective of their implementation effects. It also puts forward the problems encountered in the implementation of innovation vouchers and gives relevant suggestions to better ensure the implementation of the innovation voucher policy.

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