Macrothink Institute™

Journal of Social Science Studies
ISSN 2329-9150
2024, Vol. 11, No. 2

Research on Countermeasures for Youth Talent Innovation and Entrepreneurship Development in Zhejiang Province from the Perspective of Policy Tools

He Yan (Corresponding author)

Zhejiang University of Water Resources and Electric Power

China

E-mail: 270284514@qq.com

Received: November 24, 2024 Accepted: December 20, 2024 Published: January 21, 2025

doi: 10.5296/jsss.v11i2.22561 URL: https://doi.org/10.5296/jsss.v11i2.22561

Abstract

Policy tools are the measures governments adopt to stimulate economic development and achieve policy objectives. This study investigates the present status of policies targeting innovation and entrepreneurship of young talents in Zhejiang Province. A three-dimensional analytical framework based on policy tools was constructed to analyze 45 policy texts. The analysis revealed two major issues: first, a lack of comprehensive planning, and second, insufficient interconnection among policies. While the government emphasizes cultivating a conducive environment for the flourishing of youth innovation and entrepreneurship talent, there is a paucity of support and guidance for innovation-driven entrepreneurship and innovation platforms. The challenges confronting the field include outdated policies that fail to meet socioeconomic needs, poor policy coordination, insufficient breakthroughs in innovation, and inadequate mechanisms for assessment, rewards, and evaluation. This study analyzes related policies from the perspective of policy tools, drawing on domestic and international experiences. It also puts forward a series of countermeasures to improve policies supporting innovation, and entrepreneurship of youth talent in Zhejiang Province countermeasures

Keywords: policy tools; youth; innovation and entrepreneurship talent; Zhejiang

1. Research Content

The potential of young people is a significant factor in the development of innovation and entrepreneurship. In 2023, the General Office of the State Council issued a notice on

optimizing and adjusting policies to stabilize employment and promote development while benefiting livelihoods. Provinces subsequently introduced policies aimed at attracting and cultivating youth talent for innovation and entrepreneurship, thereby enhancing their vitality in these fields. Zhejiang Province has historically prioritized cultivating youth talent in innovation and entrepreneurship as pivotal strategic objectives. The province has successively introduced a series of policies, such as the Implementation Opinions on Promoting High-Quality Innovation and Entrepreneurship Development and Upgrading the "Mass Innovation and Entrepreneurship," the 14th Five-Year Talent Development Plan for Zhejiang Province, and the Notice on Optimizing and Adjusting Employment and Entrepreneurship Policies. These policies aim to expand the base of youth talent for innovation and entrepreneurship, provide policy support, and accelerate the establishment of mechanisms that address the development needs of youth talent. They provide intellectual and talent support for Zhejiang's high-quality development and efforts to build a demonstration zone for shared prosperity.

This study systematically collects and organizes the policies related to youth talent innovation and entrepreneurship implemented in Zhejiang Province since 2020. Utilizing a three-dimensional analysis of policy tools, it assesses the quantity of documents issued, the tools employed, and the efficacy of these policies. It subsequently analyzes policy changes, focuses, and trends to provide countermeasures for formulating youth talent innovation and entrepreneurship policies.

2. Research Method

The present study concentrates on youth talent innovation and entrepreneurship policies in Zhejiang Province. Utilizing Rothwell and Zegveld's classification of policy tools into supply-oriented, demand-oriented, and environmental, a three-dimensional analytical framework is developed to analyze policy documents based on policy tools, policy functions, and policy implementation targets.

This study utilizes a quantitative approach to analyze policy hotspots, the number of documents issued by quarter, and the three-dimensional framework by examining innovation and entrepreneurship policy documents issued in Zhejiang Province. It identifies issues and challenges in these policies and provides recommendations for the government to optimize and formulate more effective innovation and entrepreneurship policies.

2.1 X Dimension: Basic Policy Tools Dimension

The X dimension considers the characteristics of youth talent for innovation and entrepreneurship in Zhejiang Province and refers to the findings of Rothwell and Zegveld on policy tools. The policy tools are classified into three categories: supply-side policies, environmental policies, and demand-side policies (see Table 1).

Table 1. Classification and Content of Innovation Talent Policy Tools in the X Dimension

Policy Tool Type	Tool Name	Policy Tool Definition
Supply-Oriented	Talent Development	Government programs for cultivating young leaders in innovation and entrepreneurship, including training courses, skill competitions, academic salons, etc.
	Financial Support	Government-established funds such as special entrepreneurship loan funds, venture capital funds, and technology innovation funds to address funding shortages for young innovators and entrepreneurs.
	Information Support	The government builds information exchange platforms for young innovation and entrepreneurship talents through media channels.
	Infrastructure	Hardware and software support provided by the government to encourage the development of young innovation and entrepreneurship careers, such as R&D platforms, centers, and functional platforms.
	Public Services	Services provided by the government to young innovators and entrepreneurs, including talent services, children's education, household registration, medical insurance, and intermediary services.
Demand-Oriented	Government Procurement	The government promotes the adoption and growth of innovative and entrepreneurial achievements by directly or indirectly purchasing and consuming the outputs of young innovators and entrepreneurs.
	Service Outsourcing	The government entrusts young innovators and entrepreneurs with R&D or innovation projects to promote the development of related businesses.
	Overseas Exchange	The government helps young innovators and entrepreneurs go abroad to strengthen international cooperation and develop global businesses.
	Industry-Academia-Research Collaboration	The government facilitates industry-academia-research collaboration, job exchanges, or partnerships between universities and enterprises for young innovators and entrepreneurs.
Environment-Oriented	Goal Planning	The government defines goals, visions, and strategies for introducing and cultivating young innovation and entrepreneurship talents.
	Policies and	The government provides a favorable policy environment for innovation and entrepreneurship by

	Regulations	establishing evaluation rules, property rights management, patent management, and intellectual property protection.
	Strategic Measures	Policies tailored to support young innovators and entrepreneurs, such as residency policies, social security, and arrangements for spouses and children.
	Financial Support	Financial tools are used by the government to provide entrepreneurship loans, innovation credit, interest subsidies, and loan guarantees for young innovators and entrepreneurs.
	Tax Incentives	The government provides tax incentives, financial support, and tax reductions to create a favorable atmosphere for young innovators and entrepreneurs.

The specific content classification of supply-side policy tools, demand-side policy tools, and environmental policy tools is shown in Figure 1. This figure is based on the mechanism of action of policy tools on the development of youth innovation and entrepreneurship talent.

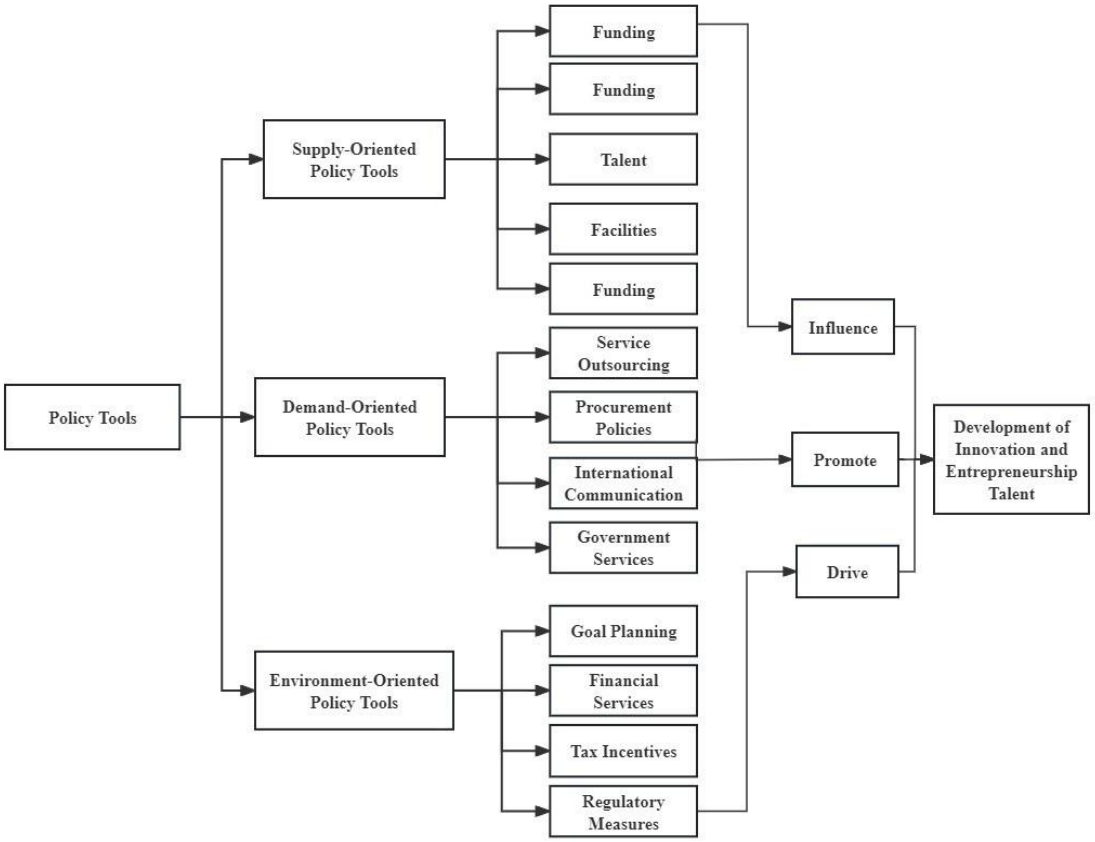

Figure 1. Mechanism Diagram of Policy Tools for the Development of Innovation Talent

2.2 Y Dimension: Policy Function

The Y dimension assesses policy functions by categorizing the objectives of youth innovation

and entrepreneurship policies into four aspects (Huang & He, 2023):

- Youth Talent Quality
- Youth Talent Scale
- Youth Talent Environment
- Youth Talent Efficiency

2.3 Z Dimension: Policy Implementation Targets

The implementation targets of innovation and entrepreneurship policies encompass innovation and entrepreneurship entities, including enterprises, universities, research institutes, and intermediary organizations (e.g., business incubators and co-working spaces).

2.4 Construction of the Three-Dimensional Analytical Framework for Policy Tools

The present study establishes a three-dimensional analytical framework for youth talent innovation and entrepreneurship policies in Zhejiang Province, based on the X dimension (policy tools), Y dimension (policy function), and Z dimension (policy implementation targets).

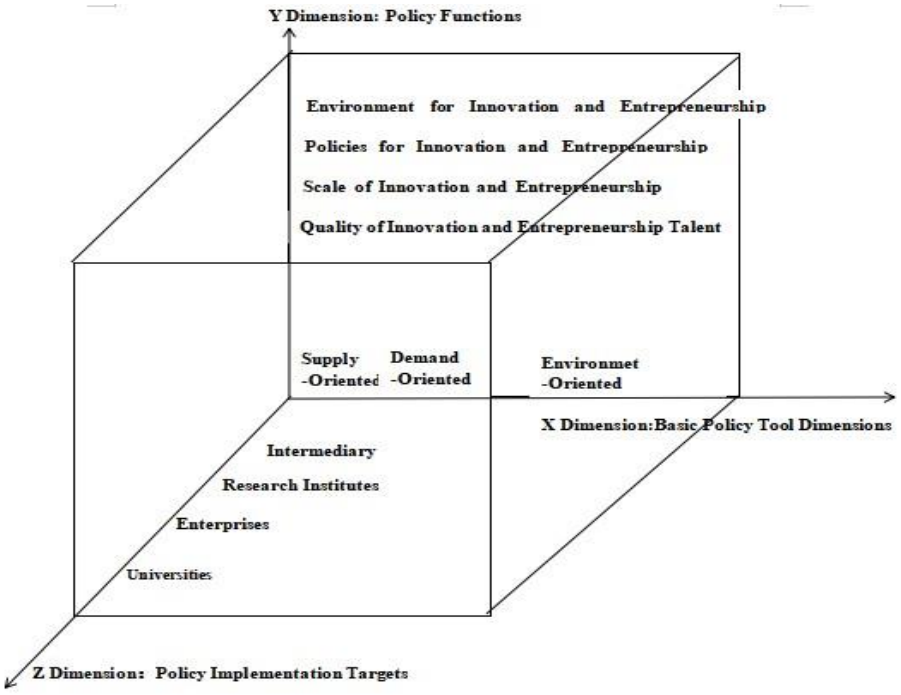

Figure 2. Three-Dimensional Analytical Framework for Youth Talent Innovation and Entrepreneurship Policies in Zhejiang Province

3. Analysis of Youth Talent Innovation and Entrepreneurship Policies in Zhejiang Province Based on Policy Tools

3.1 Data Sources for Policy Texts

The data collection period extends from January 2020 to October 2023. The policy text data is derived from publicly available policies promulgated by various provincial-level administrative departments in Zhejiang.

The search keywords employed in this study include "youth," "innovation and entrepreneurship," "talent," "innovation," "settlement," "services," and "subsidies." Following a meticulous selection, 45 policy documents were identified as valid samples (see Table 2). Due to space limitations, not all policy texts are displayed.

Table 2. Policies Related to Youth Innovation and Entrepreneurship Talent in Zhejiang Province

No.	Name of Policy Document
1	Opinions on Strengthening the Implementation of the Innovation-Driven Development Strategy and Advancing Mass Entrepreneurship and Innovation in Zhejiang Province
2	The “14th Five-Year” Talent Development Plan for Zhejiang Province
3	Opinions on Deepening Talent Development System and Mechanism Reform to Support Talent Entrepreneurship and Innovation
4	Implementation Measures for Zhejiang Province’s Entrepreneurial Guarantee Loans
5	Evaluation Method for High-Level Innovative Talent Professional Titles “Fast Track”
6	Several Opinions on Further Promoting the Use of Innovation Vouchers to Drive Mass Entrepreneurship and Innovation
7	Opinions on Supporting Employment and Entrepreneurship High-Quality Development in 26 Mountain Counties
8	Measures for Encouraging and Supporting Research Staff in Public Institutions to Engage in Entrepreneurship and Innovation (Trial)
9	Key Points for Advancing Mass Entrepreneurship and Innovation in Zhejiang Province
10	Notice from the General Office of the People’s Government of Zhejiang Province on Optimizing and Adjusting Employment and Entrepreneurship Policies to Promote Development and Benefit Livelihoods

The policies enumerated in Table 2 indicate Zhejiang’s increasing emphasis on cultivating youth innovation and entrepreneurship talent. The primary areas of concentration encompass the stabilization and expansion of employment opportunities, the refinement of the entrepreneurial guarantee loan system, the augmentation of entrepreneurial subsidies, the

enhancement of entrepreneurial training and guidance, and the facilitation of systems that encourage research personnel to engage in entrepreneurial endeavors.

3.2 Analysis of Innovation and Entrepreneurship Policies Based on Policy Analysis Tools

A thorough examination of the three-dimensional policy tool analysis framework for youth innovation and entrepreneurship policies in Zhejiang Province reveals that the talent environment is the most emphasized area in the policies, accounting for 53.32%. The second most emphasized area is the scale of innovation and entrepreneurship talent policies, which accounted for 34.54% of the total policies. The quality of talent policies accounted for 32.35%, while talent efficiency policies had the lowest emphasis, accounting for 15.33%.

Table 3. Statistical Analysis of Innovation and Entrepreneurship Policy Tools in Zhejiang Province

Policy Type	**Strategic Policies**	**Supply-Side Policies**	**Demand-Side Policies**	**Environmental Policies**	**Evaluation Policies**	**Total**
Economic Development Policies	12	3	0	22	10	47
Industrial and Enterprise Policies	38	30	6	136	39	249
Financial and Tax Policies	4	43	5	116	19	187
Science and Technology Innovation Policies	21	21	3	121	16	182
Talent Policies	6	14	2	89	7	118
Foreign Trade and Open Policies	4	4	0	18	0	26
Other Policies	6	1	2	72	6	87
Total	91	116	16	574	97	896

4. Comparative Analysis and Case Study of Innovation and Entrepreneurship Talent Policies in Economically Developed Provinces and Cities in China

4.1 Comparative Analysis of Innovation and Entrepreneurship Talent Policies in Economically Developed Provinces and Cities in China

The overall innovation and entrepreneurship ecology in Guangdong and Jiangsu is relatively high, with Zhejiang ranking third. Shandong and Anhui provinces have lower levels of innovation and entrepreneurship ecology (Zhao, Wang, & Ying, 2020).

A comparative analysis of the policies supporting the development of mass innovation spaces by provincial and municipal governments in China reveals both differences and similarities. From the perspective of supply-oriented policy tools, Guangdong, Beijing, Jiangsu, Shanghai, and Zhejiang have been proactive in implementing supply-oriented policy tools to support the development of maker spaces. Compared with Guangdong Province, Zhejiang Province receives more policy support than Guangdong Province in several areas. These include financial support, fiscal and tax support, the cultivation of small and micro enterprises, the transformation of scientific and technological achievements, and the construction of innovation platforms. From the perspective of environmental policy tools, each province and city has taken into account the actual local economic situation, fully utilized the policy tools of target planning, and regarded the development of maker spaces as an important strategic tool for regional-driven economic development. In contrast to the extensive use of supply-oriented and environmental policy instruments, governments in various regions use fewer demand-oriented policy tools. In terms of government purchasing services, the provinces and cities that have done better, such as Guangdong, Zhejiang, and Shanghai, have corresponding policies that refer to the application of science and technology innovation vouchers, the system of science and technology specialists, the construction of public technology platforms and other forms of implementation (Su, 2017). In essence, provincial and municipal authorities regard specific policy instruments, including "finance, taxation, tax incentives, and land policy support," as pivotal tools for fostering the growth of local mass innovation spaces (Huang, Zhao, & Li, 2015).

Regarding utilization of talent policy instruments, the four cities of Hangzhou, Nanjing, Shenzhen, and Suzhou exhibit a higher frequency of employing supply-oriented policy tools, with demand-oriented policy tools being the least used. This finding suggests that the implementation of talent policy tools in the four cities is consistent, with all of them attracting talents to their respective regions through the formulation and implementation of guarantee-oriented and development-oriented policies. Among the supply-oriented policy tools, the cultivation and development tools in four cities far exceed the introduction of guarantee tools. Among environmental policy tools, the proportion of institutional policy tools in Hangzhou and Shenzhen is approximately 20%, higher than that in Nanjing and other cities. Concerning the policy target population, its reach extends from university researchers and technical personnel to strategic scientists, technology leaders, innovation and entrepreneurship talents, professional technical talents, technology service and management talents, and others (Wang & Xia, 2023).

4.2 Successful Cases of Young Talents Utilizing the Innovation and Entrepreneurship Ecosystem

The Xingwang E-commerce Entrepreneurship Park, situated in Changxing County, Zhejiang Province, encompasses an area of 45 acres and currently houses 106 companies. A significant proportion of these companies, exceeding 90%, are classified as Internet enterprises, predominantly comprising young and middle-aged individuals who have recently graduated and embarked on their second entrepreneurial endeavor. To provide support for the development of small and medium-sized enterprises, the park has established an e-commerce talent training base, an e-commerce cloud warehouse, an express logistics center, and other institutions to provide support to enterprises in the operation, recruitment, and other aspects. In addition, the park has built a canteen and living apartments to meet the needs of enterprise staff life.

The Hangzhou Municipal Government in Zhejiang Province has issued a policy for recognizing specialized talents. The metropolis currently boasts a population of over 1.4 million professional and technical personnel, along with more than 600,000 highly skilled individuals. This diverse group comprises young scientists, automobile technicians, hairdressers who have emerged victorious in the World Skills Competition, renowned authors, couriers, and innovative agricultural entrepreneurs. The policy stipulates that as long as these individuals can demonstrate sufficient innovation and contribution, they are eligible to receive recognition and policy support from the Hangzhou Municipal Government.

In Hangzhou, a notable example is that of Zhao Zhanzhan, a native of Henan who graduated from a junior college and relocated to Hangzhou aspiring to become a practitioner of the traditional Chinese foot massage technique. Through his mastery of this practice, he was bestowed with the title of "National Technical Skill" and was recognized as a "Class C Talent" within the city. Additionally, he has benefited from the talent housing security policy and established residency in Hangzhou. Consequently, environmental and supply-oriented policies have stimulated many young talents to develop their creativity. These policies have incentivized talents to acquire professional titles, livelihood benefits, and security.

5. Challenges in Implementing Youth Innovation and Entrepreneurship Talent Policies

5.1 Insufficient Top-Level Design and Lack of Comprehensive Policy Planning for Talent Cultivation Models

A dedicated system for planning the cultivation of youth innovation and entrepreneurship talent is lacking. The policies related to youth innovation and entrepreneurship are dispersed throughout various talent development policies, leading to a substantial yet underdeveloped innovation and entrepreneurship workforce. There is a lack of top-tier youth innovation and entrepreneurship talent with national influence, and high-level, skilled youth innovators and entrepreneurs are still in short supply (Xu, 2021). Universities serve as the primary institutions for cultivating youth innovation and entrepreneurship talent. However, to attract students, Chinese universities aspire to evolve into comprehensive institutions at the expense of their teaching characteristics. The existing curricula, however, do not adequately emphasize innovation and entrepreneurship, a paucity of courses that support the sustainable

development of innovative and entrepreneurial talent. The provision of financial support and the implementation of preferential policies for youth innovation and entrepreneurship talent are deficient, and long-term, stable funding support is absent. Additionally, there are coordination issues in talent cultivation (Wang, 2022).

5.2 Excessive Environmental Policy Tools and a Disconnect Between Service Provision and Socio-Economic Development

The distribution of policy tools reveals that environmental policies for youth innovation and entrepreneurship talent in Zhejiang Province focused on goal planning (52%), and strategic measures (31%). However, talent regulation (7%), financial support (5%), and tax incentives (4%) are comparatively low. Due to the lack of operational and inclusive policies, the effectiveness of innovation and entrepreneurship policies is constrained. Consequently, there is a disconnection between policy implementation and the actual needs of socio-economic development (Huang & He, 2023).

5.3 Insufficient Supply-Oriented Policy Tools and Insufficient Supply of Information, Platforms, and Infrastructure for Innovation and Entrepreneurship

An analysis of the supply-side policy tools reveals that talent cultivation policies accounted for 29%, talent financial investment policies accounted for 32%, and public service policies accounted for 21%. Zhejiang Province has a developed internet economy, allowing for greater flexibility in the methods of cultivating youth innovation and entrepreneurship talent compared to other provinces. It is imperative to establish effective communication channels for youth innovation and entrepreneurship talents and to enhance the level of service for information policy. However, the findings of the data distribution indicate that a mere 8% of the information policies are directed towards support for youth innovation and entrepreneurship talents. Furthermore, the support for innovation and entrepreneurship platforms is inadequate, with only 4% of the policies falling into the category of infrastructure construction investment.

6. Countermeasures to Improve Youth Talent Innovation and Entrepreneurship Policies

The role of policy in energizing innovative and entrepreneurial activities is crucial. Zhejiang Province must refine innovation and entrepreneurship policies, ensuring their alignment with the evolving social and economic landscape. In light of the analysis and statistical results, this paper proposes the following countermeasures:

6.1 Optimize the Policy Tool System and Build a Comprehensive Policy Framework to Support Youth Innovation and Entrepreneurship Talent

Zhejiang Province boasts a robust Internet economy, characterized by a highly flexible innovation and entrepreneurship landscape. This environment fosters the rapid development of new models and industries, well-suited to young talents' innovative and entrepreneurial pursuits. However, an analysis of the data indicates a paucity of policies specifically aimed at fostering youth talent innovation and entrepreneurship. Instead, many policies are oriented toward supporting enterprise innovation and entrepreneurship.

Policies must be aligned with the growth patterns of youth innovation and entrepreneurship talent. The formulation of policies should be for all innovation and entrepreneurship entities, and the entire innovation process. In the nascent stages, policies should increase support for

innovation in entrepreneurial models and forms. To ensure the sustainable development of innovation and entrepreneurship entities, it is essential to establish support mechanisms for youth innovation and entrepreneurship talent, enhance team-building efforts, and create a warm and supportive environment for work and life (Alberts, Hyman, Pickett, Tilghman, & Varmus, 2018). This will help attract and retain youth talent for innovation and entrepreneurship.

6.2 Optimize the Policy Tool Structure and Establish a Full-Cycle Talent Development System for Youth Innovation and Entrepreneurship

The government should optimize policy tool structure, utilizing demand-oriented, supply-oriented, and environmental policy tools. The government must enhance the full-cycle talent development system to foster exceptional youth innovation and entrepreneurship(Huang & He, 2023). The national innovation and entrepreneurship policies remain in their infancy, with numerous regions offering direct financial assistance as a predominant policy strategy. However, as innovation and entrepreneurship models and the characteristics of entrepreneurs continue to evolve, the focus of policy support should gradually shift toward indirect support. This shift would promote the conversion of scientific achievements, the application of innovative models, and the formation of an industrial chain (He, Tang, & Liu, 2022).

Following international best practices, it is necessary to strengthen policy tools with a particular emphasis on environmental policy tools such as financial support and tax incentives. The development of differentiated talent policies is imperative to support and reward youth talent at various levels (Borrás & Edquist, 2013). For youth entrepreneurs, specialized innovation and entrepreneurship projects and competitions are recommended, offering comprehensive support throughout the entire process, and a range of services, including project development assistance, fundraising facilitation, tax reduction measures, reduced loan interest rates, and legal services. These measures aim to reduce the cost of trial and error, thereby fostering a more conducive environment for youth innovation and entrepreneurship.

6.3 Optimize the Design and Application of Policy Tools and Establish a Dynamic, Multi-Level Evaluation System for Youth Innovation and Entrepreneurship Talent

It is imperative for Zhejiang Province to fully utilize the strengths of various entities at different stages to ensure the effective implementation of innovation and entrepreneurship policies. A dynamic and scientific evaluation system is imperative to facilitate policy development. Enterprises should prioritize the initiation of innovation and entrepreneurship projects, as well as the establishment of platforms for high-potential employees. These initiatives should offer opportunities for exchange, learning, and training (Wang, 2016). These efforts will facilitate innovative projects and their continuous development into new economic growth drivers, thereby stimulating the innovative entrepreneurial abilities and vitality of talent.

Authors' contributions

He Yan was responsible for study design, revising, data collection, drafting the manuscript, and revising it.

Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Macrothink Institute.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer-reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

Open access

Copyrights

References

Alberts, B., Hyman, T., Pickett, C. L., Tilghman, S., & Varmus, H. (2018). Improving support for young biomedical scientists. *Science, 360*(6390), 716-718. https://doi.org/10.1126/science.aar8405

Borrás, S., & Edquist, C. (2013). The choice of innovation policy instruments. *Technological Forecasting and Social Change, 80*(8), 1513-1522. https://doi.org/10.1016/j.techfore.2013.03.002

He, D., Tang, F., & Liu, H. (2022). Ten-year review and future trend of scientific and technological reform. *Bulletin of the Chinese Academy of Sciences, 37*(5), 578-588. https://doi.org/10.16418/j.issn.1000-3045.20220412003.

Huang, C., Zhao, P., & Li, J. (2015). Research on China's Science and Technology Policy Changes based on Co—word Cluster Analysis. *Chinese Public Administration, 9,* 115-122. https://doi.org/10.3782 /j.issn.1006-0863.2015. 09.20

Huang, J., & He, Y. (2023). The Cultivation of Young Scientific and Technological Talents under the Framework of Policy "Tools-Effectiveness": An Analysis Based on 41 Effective Policy Samples in Zhejiang Province. *China University science & technology, 5,* 82-89. https://doi.org/10.16209/j.cnki.cust.2023.05.017

Su, R. (2017). A comparative analysis of Guangdong's policies with Jiangsu, Zhejiang, Beijing, and Shanghai to support maker space based on co-word analysis. *Science and Technology Management Research, 13,* 94-100. https://doi.org/10.3969/j.issn.1000-7695.2017.13.016

Wang, J. (2016). *The Evolution of Japanese Science and Technology Innovation Policy and Experience Learning.* Beijing Jiaotong University.

Wang, J., & Xia, H. (2023). Research on the Policies for Scientific and Technological Talents in Nanjing: A comparative analysis of policy texts for innovative cities. *Science Technology and Industry, 23*(19), 115-121. https://doi.org/10.3969/j.issn.1671-1807.2023.19.017

Wang, N. (2022). The historical evolution, existing problems, and countermeasures of the cultivation of young scientific and technological talents in China. *China Youth Study, 3,* 37-42. https://doi.org/10.19633/j.cnki.11-2579/d.2022.0039

Xu, H. (2021). Research on the Development Trends and Path of Scientific and Technological Talents in Jiangsu from the Perspective of Innovation-Driven. *Jiangsu Social Sciences, 3,* 223-231. https://doi.org/10.13858/j.cnki.cn32-1312/c.20210525.021

Zhao, C., Wang, L., & Ying, X. (2020). Comparative Study of Innovation and Entrepreneurship Ecosystems in Guangdong， Jiangsu， Zhejiang， Shandong and Anhui. *Journal of Industrial Technological Economics, 2,* 47-54. https://doi.org/10.3969/j.issn.1004-910X.2020.02.006