

# Research on Wenzhou to Further Increase R&D Investment to Stimulate the Vitality of Scientific Research and Innovation

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**Abstract:** Scientific and technological innovation is the effective accelerator of economic development, and research and development gives scientific and technological innovation vigorous vitality. In recent years, the state, provincial and municipal governments have introduced many policies to support enterprise R&D. For example, the Central Economic Work Conference has put forward the science and technology policy as a part of the seven combined policies, highlighting the importance of self-reliance and self-improvement of high-level science and technology. Zhejiang Provincial Party Congress takes "innovation to win" as the first of the five work directions, and fully shifts into the innovation-driven development mode; Wenzhou Municipal Party Committee and Municipal government regard "innovation enabling" as one of the "seven actions" for steady progress and quality improvement.

**Keywords:** Innovation, High-quality development, R&D, Wenzhou.

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## 1. Introduction

Scientific and technological innovation is an important driving force to develop productive forces and promote the development of human society. As scientific and technological enterprises, especially private scientific and technological enterprises, they face many difficulties on the road of scientific and technological innovation. Relevant data show that in 2020, Wenzhou's R&D expenditure accounted for only 2.3% of GDP, lower than the provincial average level of 2.88%. In 2021, the proportion is estimated to be 2.4%, and the innovation level is relatively backward. There is still a big gap with the target of "the proportion of R&D expenditure in GDP of the whole society to reach 3.1%" proposed by Wenzhou Party Congress by 2026. It is urgent to increase the pace of scientific and technological innovation, strengthen the cultivation and introduction of talents, and pay attention to the main body of enterprise R&D innovation.

## 2. Wenzhou Science and Technology Innovation Facing the Main Problems

### 2.1. Enterprise operating efficiency decline and lack of confidence in R&D.

Under the normal situation of the epidemic, the downward pressure of the economy increases, the operating efficiency of enterprises decreases, and many enterprises are faced with the risk of temporary suspension or closure. Some private enterprises in our city adopt conservative strategies and even lack confidence in the market. In addition, there are risks in R&D, which requires large input and long cycle, and is difficult to get short-term returns. Therefore, we should be cautious about R&D investment. Wenzhou Fengdi Connector Co., LTD., whose profit has declined in recent years due to the impact of the epidemic, mainly focuses on independent research and development, which is under great pressure of R&D investment. We hope to have more exchanges and cooperation with Wenzhou scientific research institutes, and

hope that the existing latest auto parts technology or production process can be applied and manufactured through procurement or technological industrialization, so as to reduce the pressure of independent research and development.

### 2.2. Enterprise R&D lack of direction and financing difficulties.

High-quality development and industrial transformation and upgrading are important tasks for current industrial enterprises, but how to transform and upgrade and how to optimize and upgrade from industries with low added value and low efficiency is troubling for enterprises. Although enterprises have the intention to change, they are confused in the face of the new economy and are plagued by problems such as lack of research and development direction, lack of ability to capture information resources and lack of research and development resources. Wenzhou Lute Packaging Co., Ltd. is a label manufacturing company. The company is small in scale and belongs to a labor-intensive enterprise. The person in charge of the company has noticed the necessity of transformation and upgrading and hopes to do the research and development of new logistics labels, but some technical factors are troubling the enterprise. At the same time, the initial investment of R&D funds is large, which is in urgent need of support from financial institutions. However, institutions provide less R&D financing for private smes based on risk, enterprise size and other factors. In recent years, a number of corporate rescue policies have been introduced, such as financing policies and tax reduction policies, some of which are unknown to enterprises and they do not know how to apply for. The interviewed enterprises are not very familiar with the business of "Science and Enterprise Communication" platform. For those enterprises that are familiar with it, they believe that the functions of technical query and docking service need to be optimized intelligently.

### **2.3. Enterprise R & D resources are insufficient and talents need to be enhanced.**

First of all, the technological innovation of leading enterprises has a profound impact on the innovation performance of the industrial chain, mainly through knowledge spillover and knowledge governance. The innovation of leading enterprises spills into the industrial chain, while other enterprises in the industry get the spillover effect due to geographical proximity, complementarity or common relationship, and continue to innovate on this basis. The new knowledge created spills into the industrial cluster, forming a progressive mutual spillover, and the total amount of knowledge spirals up. Leading enterprises get more innovation impetus due to reasonable compensation for knowledge spillover. Meanwhile, through contract governance and relationship governance, exchanges and cooperation between enterprises in the industry are increased to promote knowledge spillover again. At present, there are fewer leading innovative enterprises in Wenzhou, and the leading enterprises' leading and radiating role is weak. For example, the leading enterprises in Wenzhou, such as Chint, Delixi and Huafeng, need to improve their overall ability of integrating industrial chain, knowledge spillover and knowledge governance, and the function of strengthening and extending industrial chain need to be improved.

Secondly, there are few well-known universities and institutes in Wenzhou, and the strength is not strong. There is only one national engineering research center and two national and local joint research centers in national basic research and development institutions. The conversion efficiency of scientific research results is not high. In 2020, the turnover of Wenzhou technology trading is less than half that of Hangzhou. In the survey, Wenzhou Yuanda Entrepreneurship Service Co., Ltd. reported that it had close cooperation with Wenzhou-Kean University before the epidemic, and Kean University actively selected experts and scholars to answer some of the technical problems encountered by the company and provided free solutions for overseas scholars. However, due to the epidemic and other reasons, it has not had technical exchanges and cooperation with local universities in nearly three years. We can only purchase technology from outside, hoping to strengthen cooperation with universities and research institutes inside and outside the region.

Thirdly, the attraction of regions to R&D personnel is weak. There is a large gap between the number of national and provincial leading talents gathered and the number of advanced regions. There is a shortage of high-level innovative R&D talents. Wenzhou has introduced a number of policies benefiting talents in recent years, but enterprises report that the recruitment of R&D personnel is still difficult. Especially in recent years, during the normalization period of the epidemic situation, the popularity of public examination and editing examination has become increasingly high. Compared with the employment in the R&D department of private enterprises, the highly knowledgeable groups prefer to work in the organization with "establishment". At the same time, the classification of high-level talents in our city emphasizes full-time master students. However, many employees in enterprises and institutions, especially some senior technical personnel of enterprises who are studying for master's degrees on the job and have invention patents or won technology

research and development awards, have the same technological innovation ability as full-time master's graduates, and even some have more outstanding scientific research achievements. In addition, the identification of Class E talents is mainly used for preferential housing purchase, so a group of technical R&D talents are difficult to take root in Wenzhou.

### **3. Improve Scientific Research Policy, Precisely Support and Stimulate Enterprise Innovation Vitality**

#### **3.1. The government should strengthen publicity and make full use of the dividend of financial policy.**

First, we should build up the confidence of enterprises in R&D and tell the story of scientific and technological enterprises creating wealth. We will continue to carry forward the innovative spirit of Wenzhou entrepreneurs, who are willing to sacrifice themselves and dare to be the first in the world. Use the "Innovative Wenzhou" official account as an important medium to promote and stimulate entrepreneurship and explore the vitality of the market. Second, the promotion of R&D incentive policies was in place, and the tracking and implementation of policies were in place. For example, continue to do a good job in carrying out accurate policy propaganda services for key enterprises; Continue to make use of new media to publicize and guide policies; Continuously carry out activities such as "entering districts and cities, parks, innovative institutions, and enterprises". For example, the policy of "10000 cadres entering 10000 enterprises" in Longwan District is an important model for communication, facilitating two-way communication between government and enterprises, coordinating relevant departments to solve problems reflected by enterprises in a timely manner, and helping to fully stimulate the endogenous power of private economy; Invite the responsible persons of relevant departments to interpret in detail the policies of R&D expense addition and deduction, enterprise R&D investment bonus and subsidy, and value-added tax allowance and refund, so as to ensure that the responsible persons of enterprises and accounting personnel accurately understand and grasp the relevant policies, actively track the implementation of policies, comprehensively implement the policies, and overcome the difficulties of enterprise R&D.

#### **3.2. Introduce institutions of higher learning and R&D institutions to strengthen the foundation of scientific research support.**

The first is to promote the "Science and Enterprise Communication" platform to open up the enterprise development and technology empowerment. Promote the social application of "Science Enterprise Communication", accelerate the digital application, continue to develop functions such as intelligent matching and recommendation, intelligent comparison and filling, intelligent policy disassembly, and create digital reform achievements. Second, increase financial support and guide financial institutions to give credit preference to scientific and technological innovation. We will further use a series of tools such as "science and innovation fund, technology property securitization pilot, science and innovation index loan, direct financing incentives, and science and technology guaranteed

loans" to solve the problem of financing for research and development. Third, explore and promote the R&D reserve system to promote innovative development. Enterprises are encouraged to include a certain proportion of their total income in R&D reserves, which are calculated as losses before investment. It is suggested that enterprises participating in key core technology tackling projects, industrial chain strengthening and chain extension projects in the city should be allowed to draw R&D reserves to purchase scientific research equipment, develop software, test and detection instruments, and encourage enterprises to increase R&D investment.

### 3.3. Issue precise talent introduction policy.

First, strengthen the leading role of leading enterprises and promote the overall R&D of the industrial chain. Strengthen and expand the industrial chain around large projects, extend the front and back ends of the industrial chain, give play to the leading and driving role of leading enterprises, integrate industrial chain resources, strengthen cooperation between enterprises within the industrial chain and leading enterprises in the field of research and development, and promote the shared development of the industrial chain. It is suggested that leading enterprises should take the lead in establishing innovation consortia, scientific research institutes and institutions should work together, SMEs should participate in innovation and joint research and development, and knowledge spillover should be promoted, so as to form a systematic task oriented innovation ecosystem in which "core layer+close cooperation layer+general cooperation layer" cooperate with each other and all innovation units in the industrial chain participate together. Second, introduce R&D subjects through multiple channels and take multiple measures to attract and retain talents. On the one hand, explore the possibility of establishing a campus in Wenzhou by domestic top tier universities, and focus on introducing universities in the central and western regions to provide funding and policy support. To bring the project into Wenzhou through the R&D main body, starting from the training stage of high-end R&D talents, let the talents get familiar with this city, love this city, and stay in this city. On the other hand, we will continue to attract large and strong enterprises, attract "chain oriented" enterprises, help supplement the weak points of the industrial chain, promote the regional upstream and downstream enterprises, form a new pattern of research and development, and form a virtuous circle. Third, it is suggested to appropriately adjust the identification criteria of Wenzhou high-level talents. The provisions on full-time master's degree in talent recognition should be appropriately relaxed, and it is suggested to change it to graduate degree, master's degree or directly relax it to master's degree. In view of the fact that "full-time and part-time postgraduates implement the same examination and enrollment policies and training standards, and their academic qualifications and degrees have the same legal status and effect", it is suggested that the talent recognition standard should cancel the distinction between full-time and part-time postgraduates.

## 4. Conclusion

As we all know, the level of scientific research investment

in a region represents the level of local economic development and the emphasis on the development of the industry frontier. Under the normalization of Covid-19, problems encountered by Wenzhou enterprises in scientific research and innovation should be deeply analyzed, and various policies should be accurately introduced to help Wenzhou have more innovation vitality and achieve various scientific and technological innovation goals.

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