

# Pathways for Integrating Wenzhou's Private Economy and Higher Vocational Education in the Context of High-Quality Development

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**Abstract:** This study examines ways of convergence between the private economy and Wenzhou higher vocational education in the context of quality development. This paper presents an overall analysis of the current situation of the integration of private enterprises and vocational schools, identifies the main challenges and proposes strategies for strengthening cooperation between private enterprises and vocational schools. Although significant progress has been made in both areas, integration has not yet reached its full potential. The study calls for stronger partnerships, greater involvement of industry in curriculum design and policy measures to better integrate vocational education with the economic needs of the region.

**Keywords:** Higher Vocational Education, High-Quality Development, Private Economy.

## 1. Introduction

Wenzhou is an important center of private economy and vocational training in China and a model of regional development. The opinion on the promotion of high quality development of modern vocational education, published in October 2021, and the vocational education act, amended in May 2022, stress the need to build a modern vocational education system that integrates education and training harmoniously [1]. This integration is essential to stimulate economic and social progress, especially in dynamic regions such as Wenzhou and Taizhou.

Vocational education is an important part of higher education, which has not only the educational attribute of higher education, but also the vocational attribute of serving regional economy. Vocational training in higher education is necessary to meet regional economic needs, maintain technical expertise and support workforce development. In Wenzhou, where private enterprises account for more than 90 percent of economic indicators, vocational education is becoming increasingly important [2].

With the development of market economy and the change of talent demand, Wenzhou private economy and vocational education are facing new challenges and opportunities. For example, the shortage of teaching staff and the imbalance between supply and demand are problems. How to promote the integrated development of the two, improve the innovation ability of private enterprises and the quality of vocational education, has become an urgent theoretical and practical problem [3]. This study examines the current situation of private economic and vocational education in Wenzhou, and points out the challenges and opportunities currently faced. The talent demand and related factors of Wenzhou and other areas are analyzed and compared. The purpose of the study is to provide strategic suggestions for strengthening vocational education, encouraging private enterprises' innovation ability and promoting regional economic growth.

## 2. National and International Situation and Trends

### 2.1. Domestic Research Status

The development of higher vocational education plays an important role in the development of China's private economy. In 2020, Wenzhou was chosen as the national pilot city for the reform of vocational education, opening a new chapter in the development of the integration of vocational education and private economy. Wenzhou has fully implemented the "2021-2023 Plan for Promoting Vocational Education and Private Economy Integration to Support the Development of 'Vibrant Wenzhou and Taizhou'." The city has also introduced the "Measures to Promote University-Industry Cooperation in Vocational Education" and the "Plan to Advance the 'Five Industries Link' Reform in Vocational Education." By promoting a harmonious interface between the scientific and technical supply of vocational schools and the technological demand of private enterprises, we are witnessing the economy of enterprises [4]. For example, the promotion of Wenzhou Polytechnic to improve directional research and development, directional conversion and directional service capability, the green ion coating technology alone increases the production value of enterprises by more than 5 billion yuan.

Similarly, Taizhou is another important hub of private economic activity that has made significant progress in integrating vocational training into a broader economic strategy. Taizhou vocational training system is closely integrated with economic development goals. In April 2022, Taizhou published the integrated implementation program of vocational and technical education. This initiative, which aims to break down institutional barriers and establish a dual training system, has made an important contribution to the development of the local private economy.

In China, the development of the private sector has promoted the improvement of the vocational education system. Vocational colleges are increasingly partnering with private companies to adapt their courses to market needs. Taizhou's "Implementation Opinions on Promoting the

Development of Mixed Ownership of Vocational Education" encourages social capital to invest in vocational education through a variety of cooperation models, and has carried out more than 20 pilot projects. For example, Zhejiang Dongfang Polytechnic and Wenzhou Packaging Association have established China's first "smart packaging college," while Wenzhou Vocational College of Science and Technology has partnered with Xinruipeng Pet Medical Group to address the shortage of pet medical professionals.

In Shandong Province, 322 professional teaching standards focusing on ability improvement have been formulated in cooperation with more than 6,000 enterprises. BinZhou Polytechnic gives priority to combining industrial needs, and Shandong Vocational College of Science and Technology has cooperated with enterprises to create 14 industrial colleges to explore new models of applied vocational education and support regional economic development.

## 2.2. Status of International Development

Internationally, the vocational education system is developed through various school-enterprise cooperation models. In the United States, "apprenticeships" combine businesses, unions and educational institutions to provide practical and theoretical training. This model improves company competitiveness by developing talent suited to industry needs, but faces challenges related to funding and national implementation [5].

The "dual system" in Germany involves a cooperative way in which enterprises and vocational schools jointly provide training programs. Students receive practical experience in the company and theoretical instruction in the school, earning dual certification [6]. This model has benefited from government funding and regulatory oversight, but it also faces challenges such as changes in the labor market, technological advances and the integration of migrant workers. Japan's "industry-university cooperation" approach brings together companies and educational institutions to cooperate in training and research. Such partnerships can help students develop skills directly applicable to the needs of industry, while businesses have access to a well-prepared workforce [7]. However, this model faces the challenges of industry internationalization and globalization, which can have implications for the sustainable development of "industry-university cooperation".

The sustainable development of vocational education and the private economy relies on their ongoing progress and mutual reinforcement. Higher vocational education must focus on high-quality development and regional economic growth. This approach will help achieve the vitality and expansion of the private economy. Meanwhile, the private economy's growth drives continuous improvement in the higher vocational education system. This process involves ongoing adaptation and adjustment, leading to a closer connection between the two systems.

## 3. Empirical Analysis

### 3.1. Methodology

This study explores the impact of Wenzhou's private economy on vocational training. It uses a variety of research methods, such as questionnaires, in-depth interviews, and field surveys. The study, conducted between May 2023 and August 2023, focuses on Wenzhou and its surrounding areas, such as Taizhou, as well as other regions with developed

private economy and vocational education systems, such as Shandong and Shanxi provinces. The study involved three higher vocational colleges, ten private companies and several government and industry bodies. Participants in the study included educators, administrators, students, senior executives, human resource professionals, and rank-and-file employees from businesses.

### 3.2. Correlation Analysis

In order to analyze the relationship between the level of private economic development and the quality of vocational education, this research calculated the Pearson correlation coefficient to measure the strength of the linear relationship between the two variables.

#### 3.2.1. Analysis Results

##### (1) The Relationship Between the Development of Private Economy and the Quality of Vocational Education

The analysis shows a strong positive correlation between private economic development (measured by factors such as the number of firms, tax contributions and share of GDP) and the quality of vocational education. Pearson correlation coefficient was 0.72 ( $p < 0.01$ ), indicating that with the development of private economy, the quality of vocational education tended to improve.

##### (2) Correlation of Specific Indicators

Based on the correlation between the number of enterprises and courses, the study found that the number of private enterprises was significantly positively correlated with vocational education courses (correlation coefficient = 0.75,  $p < 0.01$ ). As the number of companies increases, the course content is regularly updated and improved to better meet the needs of the industry.

In addition, from the perspective of tax burden ratio and graduate employment rate, the tax burden ratio of private enterprises is positively correlated with the employment rate of vocational education graduates (correlation coefficient = 0.68,  $p < 0.01$ ). A higher share of taxes tends to lead to more investment in vocational education, thereby increasing the employability of graduates.

### 3.3. Regression Analysis

In order to explore the impact of private economy on the quality of vocational education, this paper adopts multiple linear regression analysis. The analysis examines the impact of various factors, such as the number of firms, tax share, and GDP contribution, on vocational education quality.

#### 3.3.1. Results of regression analysis

The quantity of private businesses has a significant impact on the caliber of vocational training (regression coefficient  $\beta_1 = 0.45$ ,  $p < 0.01$ ). Accordingly, higher education quality is associated with a greater number of firms. Regression coefficient  $\beta_2 = 0.35$ ,  $p < 0.05$ ) indicates that the amount of taxes paid by private businesses has a favorable impact on education as well. The bigger the tax share, the more money is allocated to education. The quality of schooling is more impacted by the private economy's GDP contribution (regression coefficient  $\beta_3 = 0.42$ ,  $p < 0.01$ ). This suggests that higher economic development leads to higher education investment, which raises the standard of education. According to the regression model's  $R^2$  value of 0.72, these economic factors mostly account for variations in the caliber of vocational education.

## 4. Discussion and Suggestions

### 4.1. Effect of Growth in the Private Sector

The results of the analysis indicate that there is a positive impact of the development of private sector development on the quality of vocational education. The amount of private enterprises, tax revenue, and share of GDP affect the quality of vocational education significantly. With improved standards of teaching, profitable growth for private educational institutions has also aligned higher education with market forces by making more investment and resource use within the institutions.

### 4.2. Policy Assistance and Motivation

Government intervention is necessary in strengthening the relationship between private sector growth and vocational education. Through legislation and tax incentives, as well as financial subsidies, the government can motivate private enterprise to invest more in vocational education. These measures reduce the cost burden of business while building a policy framework that requires their active participation in educational endeavors, hence driving resource sharing and mutual benefits. More concretely, it could be highly advantageous to provide tax relief or more favorable policies for the businesses that are involved in vocational education—especially that supportive in curriculum designing and providing internships.

### 4.3. Bolster the System of Collaboration

Institutions of vocational education ought to form enduring alliances with private businesses. They must design training courses and curricula to meet the needs of the market today. It's critical to create platforms that combine business and education. These platforms will facilitate collaboration in the areas of training, curriculum development, and technological innovation. To standardize and institutionalize these efforts, cooperation from the government and education authorities is essential. As a result, creating a platform for cooperation is essential to facilitating successful communication and collaboration between businesses and vocational colleges.

### 4.4. Enhance Funding and Training Quality

Companies themselves should also invest more in training and practical facilities, especially in creating specialized courses that better serve the market. In addition to making education more responsive, investments in utility facilities will increase the level and usefulness of education. These vocational schools should also update their curriculum regularly to adapt to changes in the market. For example, companies and institutions should cooperate to establish actual training bases so that students get the practical training they need to remain competitive in the job market. Institutions should also ensure that their curricula are regularly updated and reviewed to align with industry standards.

### 4.5. Growing Areas of Collaboration

Higher vocational education institutions and private enterprises should integrate their efforts and increase their long-term cooperation in research work and innovative thinking. The two sides can pool superior resources and give full play to their respective advantages by cooperating with relevant research institutions and joint innovation centers. A variety of cooperation ways can be discussed, which will help to integrate the system of higher vocational education and the

development layout in the region. Students can also interact with the latest technologies and contribute to industry-critical research by working in collaborative institutes focused on driving technological innovation. Students can work on professional projects, participate in technology research and development, and expand their practical abilities and imagination and creativity through the joint development of innovation centers.

## 5. Conclusion

This study thoroughly analyzes the integration of Wenzhou's private economy with higher vocational education, emphasizing the significant impact of the private economy on the quality of vocational education. By evaluating the current status, key factors, and development paths of this integration, the study demonstrates how the growth of the private sector is driving improvements in vocational education quality.

In order to achieve the mutual benefit of regional economic growth and vocational education, the government and relevant stakeholders should increase policy support and promote the deep integration of vocational education and the private sector. Such an approach would not only improve the quality and effectiveness of vocational training, but also contribute to the broader goal of high-quality regional economic development. As a leader in private economic growth, Wenzhou is well-positioned to continue to play a key role in nurturing diverse talent, supporting economic development, retaining technical skills and promoting education.

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