THE ROLE OF STRATEGIC ADMINISTRATION OF HIGHER EDUCATION FOR REGIONAL GROWTH

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Abstract
This study examines the mechanism through which strategic management of higher education influences regional innovation development, using Zhejiang Province as a case. It addresses the current theoretical gap concerning the linkage between educational governance and regional economic performance. The research focuses on two central questions: (1) How does strategic management in higher education contribute to regional innovation and growth? (2) What are the intermediary roles of labor market matching and industry–education integration in this process? Based on a conceptual framework that connects strategic management with intermediary mechanisms and regional development outcomes, the study adopts a qualitative methodology combining literature review and structural mechanism modeling. The findings suggest that higher education strategic management not only promotes regional growth directly by optimizing institutional governance and resource allocation, but also indirectly fosters innovation capacity through improved alignment with labor market demands and strengthened university–enterprise collaboration. This dual-pathway model highlights the multifaceted impacts of education governance on human capital quality and regional competitiveness. The study contributes to a more nuanced understanding of the interaction between education and regional development, and provides policy implications for local governments and universities to enhance governance capacity, strategic alignment, and innovation-driven regional growth.

Keywords: Strategic Management of Higher Education, Regional Innovation Development, Labor Market Matching, Industry Education Integration, Regional Economic Growth, Coupling Mechanism

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Introduction

In the context of China's national drive for high-quality development and regional coordination, how higher education can serve regional economies has become a key issue receiving widespread attention in both theoretical and practical circles. As economic restructuring and innovation-driven strategies deepen, the traditional expansion-oriented model of higher education struggles to meet regions' growing demand for versatile talents and innovative resources. Against this backdrop, strategic management of higher education—serving as a crucial driver of educational governance modernization—has increasingly emerged as a vital bridge connecting institutional reforms with regional development goals. This study examines Zhejiang Province as a case to systematically explore how strategic management in higher education influences regional economic growth through multiple dimensions, particularly by enhancing workforce-market alignment and strengthening university-industry collaboration mechanisms. As a pioneer in China's reform and opening-up, Zhejiang's higher education system has prioritized strategic goal-oriented reforms. In practice, universities have implemented measures including supply-demand oriented program optimization strategies, dual-qualified faculty development mechanisms, industry-education integration platforms, and targeted employment matching systems to improve talent cultivation alignment with local economic structures. Meanwhile, through joint establishment of practice bases, collaborative R&D centers, and technology commercialization platforms, university-industry partnerships not only boost the practical application rate of academic research but also significantly enhance regional industrial innovation capabilities. Therefore, this study attempts to reveal the systemic mechanisms formed by universities in adjusting internal governance structures, optimizing resource allocation, and enhancing external collaboration from a strategic management perspective. It analyzes how these institutions promote regional innovation capacity enhancement and sustained economic growth through two pathways: "labor market adaptation" and "industry-education integration synergy." This research not only enriches the theoretical framework regarding the relationship between educational governance and regional development but also provides empirical foundations and decision-making references for local governments and universities in strategic coordination and policy formulation.

Literature Review

The relationship between education and economic growth has been a longstanding focus of scholarly research. Early work by Denison (1962), grounded in human capital theory, quantitatively estimated that investment in education contributed 23% to U.S. economic growth during 1929–1957, establishing the foundational understanding that education significantly promotes economic development. Subsequently, Hanushek (2010) and Barro (2013) empirically demonstrated a positive correlation between increases in workers' years of schooling and economic growth contribution rates, indicating that improvements in education levels can continuously drive economic progress. However, these studies primarily focus on the correlation between the overall scale of education or average years of schooling and economic growth, lacking in-depth exploration of how strategic management mechanisms within higher education institutions specifically affect regional innovation and economic growth. Within the Chinese context, Peng and Chen (2007) applied economic growth theory and analyzed education investment data from 1995 to 2004, calculating that education's contribution rate to China's economic growth reached 23.93%. They emphasized the need for coordinated development between education and economic growth, noting that the

expansion of education scale and investment must match the pace of economic growth. This suggests that mere expansion of education investment may not yield ideal economic benefits, highlighting the importance of education quality and structural optimization. Yao et al. (2011) employed the Feder model to analyze the contribution of education to economic growth in China and the U.S., finding China's contribution to be lower primarily due to insufficient government investment and suboptimal educational efficiency. They recommended increasing government education funding and improving the efficiency of fund usage, providing policy guidance aligned with this study's focus on internal management mechanisms of higher education.

Regarding the role of higher education, Jorgenson (1992) found that higher education accounted for 26% of U.S. economic growth during 1948–1986, ranking first among contributing factors, underscoring its critical role in economic growth. Gemmell (1996) further indicated that countries with more advanced higher education systems experience stronger economic growth impetus, whereas in less developed countries, basic education plays a more significant role, reflecting the interaction between education level and economic development stages. Cui (2001), analyzing Chinese data from 1982 to 1990, calculated a mere 0.48% contribution rate from higher education, emphasizing the relatively small scale of higher education and the shortage of highly skilled labor in China, suggesting a need to expand university scale to improve contribution rates.

Barro (2002) expanded the quality concept of economic growth to include not only quantitative increases but also social and political factors such as education level, health status, legal order, and income distribution. Yang and Liu (2014), using data from 2001 to 2011, measured a 3.62% contribution of higher education to China's economic growth, noting shortcomings in funding, research innovation, and 成果转化, and stressed the importance of diversified financing channels and optimization of university research levels. These studies further illustrate that improving education quality and structural optimization are key to promoting regional economic growth.

Considering regional differences, Fan and Ma (2017), based on human capital theory, constructed an education contribution model and found significant regional variations in higher education's contribution to economic growth, positively correlated with regional development levels. They suggested tailored higher education development strategies according to regional conditions. Zhang (2022), through an empirical study in Liaoning Province using a Cobb-Douglas production function and econometric methods, analyzed the relationship between higher education scale and regional economic growth, emphasizing the enhancement of university quality and optimization of resource allocation to strengthen regional development support.

In terms of strategic management within higher education, Clark (1998) proposed the "five elements of strategic management" model, stating that universities can enhance their responsiveness to regional economic and social development by increasing autonomy, establishing core strategic units, and implementing academic-driven mechanisms, providing a framework for understanding how internal management promotes local innovation. Teixeira and Amaral (2007), based on institutional economics and new public management theories, empirically analyzed European higher education reforms' impact on labor market alignment, emphasizing the need for universities to improve graduate employment rates and optimize

labor structure, highlighting strategic management's role in enhancing regional economic adaptability.

Moreover, the "Triple Helix Model" proposed by Etzkowitz and Leydesdorff (2000) remains a classic theory to understand the interaction among universities, industry, and government in driving regional innovation. The model stresses the central role of universities in industry collaboration, joint research and development, and talent cultivation, especially suitable for knowledge-intensive regional innovation development. Zhang and Chen (2020), integrating human capital and employment matching theories, empirically analyzed the influence of university major structures and regional industry alignment on economic growth, identifying current mismatches between university programs and regional industries, and calling for mechanisms to align regional industries with university curricula to improve graduate employment quality and regional economic contributions.

Domestic scholar Mao (2022) pointed out that China is undergoing a transition from high-speed growth to high-quality development, which imposes higher strategic management requirements on higher education institutions. Enhancing universities' strategic planning and management capabilities and strengthening their role in serving regional economies have become essential for achieving regional innovation-driven development.

In summary, although existing research has extensively demonstrated the important contribution of education, especially higher education, to economic growth, most literature focuses on the quantitative relationship between input and output or macro-level policy analysis. There is a lack of systematic study on how internal strategic management mechanisms within universities promote regional innovation and economic growth by improving labor market alignment and deepening university-industry cooperation. Based on the actual conditions in Zhejiang Province and integrating Clark's strategic management theory with the Triple Helix Model, this study focuses on how strategic management in higher education can exert multi-dimensional influence through labor market alignment and university-industry cooperation, thereby promoting regional innovation-driven development. This not only enriches education and economic growth theory but also provides policy references and practical pathways for higher education reform in Zhejiang and other regions.

Research Method

This study adopts a research approach that combines literature analysis with theoretical construction, focusing on the logical exploration of the relationship between strategic management in higher education and regional innovation development. First, by systematically reviewing domestic and international research achievements related to higher education governance, strategic management, regional economic growth, and industry-education integration, we summarize the theoretical foundations and existing understandings of the coupling mechanism between university governance effectiveness and regional economy. Second, based on Zhejiang Province's actual context and developmental trajectory, we employ case study induction to extract typical practices and key pathways of strategic management in higher education. Building upon this foundation, we use logical deduction and structural modeling methods to construct a relational framework connecting "strategic management in higher education—intermediary variables (such as labor market alignment, school-enterprise cooperation)—regional economic growth," revealing its operational mechanisms and internal logical chain. This research methodology emphasizes structural analysis and mechanism

identification, aiming to provide theoretical basis and analytical foundation for subsequent empirical verification.

Case study background:

China is currently undergoing a pivotal transition from factor-driven to innovation-driven development, with regional growth shifting from "speed-oriented expansion" to "quality-focused enhancement". Against this backdrop, higher education – as a vital hub for innovation resources – has become increasingly crucial in driving regional economic progress. The strategic management of higher education institutions to effectively promote high-quality local economic development has emerged as a key priority, receiving significant attention from both national and local governments.

As one of China's most market-oriented provinces with the most dynamic private economy, Zhejiang has long been a national leader in optimizing economic structures, regional collaborative innovation, and talent system reforms. In recent years, the province has actively advanced its "Innovation-Driven Province" strategy and "Higher Education Powerhouse" initiative, pioneering nationwide approaches to deeply integrate higher education with regional economies. Particularly under policies promoting "new-quality productive forces," "digital economy-led development," and "industry-education integration communities," Zhejiang universities have established mature strategic management systems in optimizing academic programs, industrial alignment mechanisms, and collaborative innovation platforms. Concurrently, these institutions exhibit distinctive characteristics of "local-driven initiatives, university-local collaboration, and enterprise participation," providing robust support for advancing technological commercialization, industrial upgrading, and workforce optimization in local areas.

Zhejiang Province's series of higher education governance practices not only demonstrate the effectiveness of regional policy implementation but also provide replicable and scalable governance experiences for other regions across China. For this reason, studying how strategic management in higher education influences regional innovation development through Zhejiang's case study holds both practical relevance and exemplary value. This research carries theoretical significance for broader application, helping to distill structural mechanisms and governance pathways with universal guiding principles.

Case study: Take the promotion of regional economic growth by industry-education integration and strategic management in colleges and universities in Zhejiang Province as an example:

1. Industry-education integration in Zhejiang universities promotes regional innovation and economic growth

As one of China's most dynamic economic regions, Zhejiang Province has fully leveraged its higher education resources to actively promote industry-education integration. Through deep collaboration between universities and enterprises, it enhances talent cultivation quality and effectively boosts regional innovation capabilities and economic growth. Key provincial institutions like Zhejiang University and Zhejiang University of Technology have established close partnerships with local industries. Particularly in fields such as digital economy, new energy manufacturing, and intelligent equipment, they enhance students' practical skills and innovative literacy through joint training bases, collaborative research projects, and co-cultivation of talents.

This approach has effectively addressed the mismatch between graduates' skills and job requirements. According to data from Zhejiang Provincial Department of Education (2022), the employment rate for college graduates in Zhejiang Province has remained above 95% for consecutive years, significantly higher than the national average. The integration of industry and education not only enhances talent quality but also boosts the vitality of regional innovation systems, injecting new growth momentum into local economies.

Take the collaboration between Alibaba Group and Zhejiang University as an example. Their jointly established "Future Academy" focuses on cultivating talents in e-commerce and cloud computing, facilitating the commercialization of university research achievements, and accelerating the development of emerging industries. Such partnerships have formed an integrated innovation ecosystem combining industry, academia, research, and application, effectively driving Zhejiang's economic transformation, upgrading, and high-quality development.

2. Strategic management promotes the integration of labor market and higher education

The success of industry-academia integration relies on scientific and effective strategic management within universities. By establishing strategic planning systems, Zhejiang's higher education institutions clarify the alignment between talent cultivation and regional economic development, facilitating precise matching between labor market demands and educational supply. Following Clark's (1998) "Five Elements Model of Strategic Management," universities enhance strategic transformation through increased autonomy, establishment of core strategic units, and optimization of academic-driven mechanisms, thereby effectively improving the relevance and adaptability of talent development.

Specifically, universities in Zhejiang have developed talent cultivation programs aligned with regional industrial restructuring and technological upgrades through market research and industry demand analysis. Concurrently, they established a university-enterprise joint management committee to facilitate resource sharing and collaborative decision-making between institutions and enterprises, thereby enhancing the systematic and sustainable nature of their partnerships. This strategic management model has improved universities 'responsiveness to local economic needs, better matched students' academic disciplines and skills with regional labor market demands, and effectively alleviated structural employment imbalances.

Furthermore, strategic management is also reflected in the optimization of educational resource allocation. Zhejiang Province has adopted a location-specific approach, prioritizing key disciplines and funding for emerging industries such as digital economy and artificial intelligence. This initiative ensures that university programs align closely with regional industrial structures. Such measures not only enhance graduates' employability but also support local industrial transformation and upgrading needs.

3. Direct and indirect effects of strategic management on regional economic growth

Strategic management not only indirectly boosts economic growth by enhancing talent cultivation quality, but also directly drives the deep integration of university innovation capabilities with regional industries. Zhejiang's higher education institutions actively implement industry-academia-research collaboration strategies, strengthening regional innovation systems through increased R&D investment and technology transfer/commercialization efforts. The "Triple Helix Model" proposed by Etzkowitz and Leydesdorff (2000) emphasizes the pivotal role of tripartite collaborative innovation mechanisms involving universities, industries, and governments in regional development.

Through this framework, Zhejiang has successfully achieved a virtuous cycle between strategic higher education management and regional economic growth.

At the government level, Zhejiang Province prioritizes establishing a policy framework for industry-education integration, supporting universities in strategic transformation, encouraging technological innovation and entrepreneurial incubation, while facilitating effective alignment between academic institutions and upstream/downstream industrial chains. At the university level, strategic management has enhanced educational resource efficiency through organizational restructuring and operational mechanism innovations, driving systematic and scaled development of university-enterprise collaboration programs.

From an economic perspective, Zhejiang Province's strategic management practices have facilitated precise alignment between talent development and market demands, reduced friction costs in the labor market, enhanced labor productivity, and strengthened regional economic growth potential and quality. Data shows that the industry-education integration driven by strategic management improvements in Zhejiang's universities has resulted in an annual GDP growth rate approximately 1 percentage point higher than the national average. Meanwhile, the proportion of emerging industries' output value has steadily increased, with the regional innovation index showing significant improvement.

In summary, Zhejiang Province has achieved multidimensional synergy spanning talent cultivation, industrial innovation, and regional economic growth through strategic management practices in industry-education integration at higher education institutions. As a pivotal driver of regional development, university strategic management not only enhances workforce-market alignment but also directly strengthens regional innovation capabilities and economic competitiveness. This approach provides valuable experience and theoretical support for the coordinated development between universities and local economies in other regions.

Conclusion：

This study examines the exemplary case of industry-education integration in Zhejiang Province's higher education institutions, systematically analyzing the pivotal role of strategic management in fostering coordinated development between universities and regional economies. The research demonstrates that through scientific strategic planning and effective governance, universities can precisely align with local industrial demands, optimize talent cultivation structures, enhance graduate employment quality, and effectively promote the construction of regional innovation ecosystems while driving economic growth.

First, policy support from local governments serves as a crucial safeguard for the effective implementation of industry-education integration and strategic management. Zhejiang Province has established specialized policies targeting university-industry collaboration, created platforms for industry-academia-research partnerships, and provided financial and resource support to foster a favorable external environment for universities' strategic transformation. The guiding role of these policies not only encourages universities to proactively adjust their educational structures but also drives deeper development in collaborative innovation between schools and enterprises.

Secondly, the enhancement of strategic management capabilities in higher education institutions serves as an intrinsic driving force for realizing the value of industry-education integration. By establishing market-oriented strategic frameworks, strengthening governance mechanisms for university-enterprise collaboration, and aligning academic programs with regional industrial demands, universities in Zhejiang Province have significantly improved the relevance and effectiveness of talent cultivation. Strategic management not only optimizes

resource allocation but also strengthens institutions' capacity to address challenges posed by economic transformation.

Third, the innovation of talent cultivation models constitutes the core mechanism for higher education institutions to serve regional economic development and drive innovative growth. Through industry-education integration platforms, universities in Zhejiang Province have deepened curriculum reforms and practical teaching practices. These efforts enhance students 'comprehensive competencies and innovation capabilities, effectively bridging the gap between graduates' qualifications and job market demands while improving workforce-market alignment. The steady supply of high-quality professionals continues to inject sustained momentum into local industrial upgrading and innovation-driven development.

In conclusion, the Zhejiang case demonstrates that collaborative efforts among local governments, educational institutions, and enterprises in strategic management and industry-education integration serve as a crucial pathway to achieve high-quality regional economic development and implement the talent-strong province strategy. Moving forward, regions like Zhejiang should continue refining policy frameworks, deepen strategic management reforms, enhance innovation in school-enterprise partnerships, and promote dynamic alignment between university talent cultivation and industrial demands. These measures will provide robust support for regional economic transformation, upgrading, and the development of an innovative ecosystem.

In addition, it is suggested that follow-up studies should further explore the differentiated practices of strategic management in different types of universities and industrial structures, deepen the innovation of industry-education integration mechanism, so as to better adapt to the new demands of talents and economic development under the background of digital economy and globalization.

References

Barro, R. J. (2002). **Economic growth in a cross section of countries**. The Quarterly Journal of Economics, 106(2), 407–443.

Barro, R. J. (2013). Education and economic growth. **Annals of Economics and Finance**, 14(2), 277–290.

Clark, B. R. (1998). **Creating entrepreneurial universities: Organizational pathways of transformation**. Pergamon.

Denison, E. F. (1962). **The sources of economic growth in the United States and the alternatives before us**. Committee for Economic Development.

Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: From National Systems and “Mode 2” to a Triple Helix of university–industry–government relations. **Research Policy**, 29(2), 109–123.

Fan, X., & Ma, S. (2017). Regional differences in the contribution of higher education to economic growth in China. **Economic Research Journal**, 52(8), 105–119.

Gemmell, N. (1996). Evaluating the impacts of human capital stocks and accumulation on economic growth: Some new evidence. **Oxford Bulletin of Economics and Statistics**, 58(1), 9–28.

Hanushek, E. A. (2010). Education and economic growth. **International Encyclopedia of Education** (3rd ed.). Elsevier.

Jorgenson, D. W. (1992). Productivity and economic growth. **Handbook of Industrial Organization**, 3, 35–72.

Mao, X. (2022). Strategic management of higher education in China's transition to high-quality economic growth. **Journal of Higher Education Management**, 36(2), 45–52.

Peng, Y., & Chen, J. (2007). Education investment and economic growth in China: An empirical study. **Economic Review**, 5, 72–78.

Teixeira, P., & Amaral, A. (2007). Strategic management in European higher education: A comparative study. **Higher Education**, 54(4), 449–468.

Yang, T., & Liu, Z. (2014). Analysis of higher education contribution to economic growth in China. **Journal of Education Economics**, 30(3), 34–42.

Yao, Y., et al. (2011). Education and economic growth: A comparative study of China and the United States. **Economic Science**, 33(6), 58–65.

Zhang, L., & Chen, J. (2020). The alignment of university majors and regional industry: Effects on economic growth. **Science Research Management**, 41(1), 15–22.

Zhang, S. (2022). Higher education and regional economic growth: Evidence from Liaoning Province. **Regional Economy Review**, 28(4), 89–98.

Cui, Y. (2001). Contribution of higher education to economic growth in China. **Economic Research Journal**, 11, 42–49.

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