

A Study on Strategies for Equalizing Public Services in Vocational Education under the Urban-Rural Dual Structure

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Abstract: In the strategic context of promoting rural revitalization and common prosperity comprehensively, the equalized provision of public services in vocational education has become a critical link in achieving social equity and optimizing the allocation of human capital. However, most research mainly focuses on elaborating macro-policies. There are few analyses on the multiple dualistic patterns arising from the urban-rural dual structure within the vocational education system and their root causes, which causes a lack of systematic solutions. Employing literature analysis and case study methods, this paper investigates the structural imbalances in vocational education service provision, manifested as “prioritizing urban over rural areas, emphasizing both basic and higher education while neglecting the secondary vocational education, and valuing academic credentials over practical training.” It aims to explore effective pathways for promoting the equalization of public services in vocational education. The study proposes systematically dismantling institutional and systemic barriers through measures such as constructing an integrated urban-rural vocational education network, fostering diversified development of educational providers, and establishing demand-oriented talent cultivation models. These efforts are designed to enhance the accessibility and adaptability of public services, providing institutional guarantees for the equitable development and quality enhancement of vocational education.

Keywords: Vocational education; Equalization of public services; Urban-Rural Dual structure; Rural revitalization; Talent cultivation

I. Introduction

Urbanization theory generally posits that modern urban society is a product of advanced industrialization. In developed Western countries, there is no distinct boundary between urban and rural areas, and the free flow of residents between them is considered a hallmark of an advanced stage of urbanization. In contrast, significant disparities persist between urban and rural areas in China regarding the degree of industrialization, level of modernization, and economic linkage mechanisms, forming a typical urban-rural dual structure. Education serves as a crucial pillar of

national modernization, with vocational education undertaking the key function of driving industrial structure optimization and upgrading. To advance the development of the vocational education system, the state has successively issued several important policies in recent years. The National Implementation Plan for Vocational Education Reform (2019) explicitly states that “vocational education and general education are two distinct types of education, possessing equal importance,” marking a fundamental shift in the positioning of vocational education. The Vocational Education Quality Enhancement and Excellence Cultivation

Action Plan (2020-2023) further focuses on quality improvement and connotative development, strengthening vocational education's capacity to serve regional economies. Additionally, The Opinions on Promoting High-Quality Development of Modern Vocational Education (2021) systematically constructs the policy framework for high-quality vocational education development in the new era, emphasizing deepened integration of industry and education, optimized resource allocation, and enhanced adaptability and contribution of vocational education to economic and social development. These policies collectively promote the improvement of the vocational education public service system and its service capacity, providing institutional safeguards for building a modern vocational education system.

II. The Connotation of Equalization of Public Services in Vocational Education

The theoretical connotation of equalization of public services in vocational education must be grasped based on clarifying core concepts such as public services versus public goods, educational public services, and vocational education public services. Economics distinguishes government output into tangible products and intangible services. The former possesses non-rivalry in consumption and non-excludability in benefits, with their production and consumption separable in time and space; the latter emphasizes the simultaneity of production and consumption, with the government undertaking a leading responsibility in the provision process. As a category of social public services, educational public services possess quasi-public attributes and can be defined as the functions undertaken by the government, non-governmental organizations, and enterprises in the provision of education. As its subsystem, the connotation of vocational education

public services can be analyzed across three dimensions: In terms of supply subjects, although multiple actors may participate, the government remains dominant due to the quasi-public good nature of vocational education and historical institutional pathways. In terms of service content, it encompasses academic education for school-age populations, vocational training for adults, and pre-service and in-service education throughout careers. In terms of target scope, its public nature requires it to be accessible to all members of society with vocational education needs.

Equalization of public services in vocational education is a policy goal proposed during China's specific stage of development, reflecting the state's pursuit of educational equity. Its core lies in the government optimizing the allocation of vocational education resources between urban and rural areas, providing stage-appropriate, standard-reasonable, and level-comparable vocational education services, thereby enabling urban and rural residents to enjoy roughly equal conditions in terms of the quantity, quality, and opportunity of vocational education. This connotation can be further understood as—— At the subject level, emphasizing the transformation of government functions towards a service-oriented model and constructing an institutional guarantee system; at the outcome level, focusing on the role of rural vocational education in promoting urban-rural integration, economic development, and poverty alleviation; at the value level, pursuing procedural equity in vocational education and safeguarding the equal right to education and development opportunities for urban and rural residents.

III. Structural Dilemmas and Multi-Dimensional Imbalances in the Development of Vocational Education in China

As China's vocational education system

has developed rapidly, its internal structural contradictions have become increasingly prominent, forming a key bottleneck constraining its service to economic and social development. Specifically, vocational education faces a triple dilemma. Firstly, the significant imbalance in resource allocation under the urban-rural dual structure exacerbates educational inequality. Secondly, the “V-shaped” investment structure within the education system that “emphasizes both ends and neglects the middle” leads to the marginalization of secondary vocational education. Thirdly, the internal binary divide between academic education and vocational training within the vocational education system, coupled with the mismatch between teaching content and industry demands, weakens its function in serving social transformation. An in-depth examination of these structural issues lays the practical foundation for proposing systematic optimization pathways later in this study.

A. The Imbalance in Resource Allocation under the Urban-Rural Dual Structure

As a typical characteristic of developing countries, the “urban-rural dual structure” profoundly influences China's vocational education system. Its essence is the structural divide between tradition and modernity during social transformation. This divide is centrally manifested at the economic level as a mismatch between urbanization and industrialization levels, while in the education sector it is prominently reflected in the non-equilibrium allocation of vocational education resources between urban and rural areas. The distinctive nature of vocational education makes it a direct pathway “for individuals to seek livelihood and for society to pursue development,” and it should play a key role in bridging the urban-rural gap. However, reality reveals a clear “urban bias.” Statistical data from 2015-2025 show that

the proportion of educational expenditure for rural vocational high schools remained within the range of 19.2% to 22.8%, while the proportion for urban areas consistently stayed above 77%, indicating a persistent significant gap in investment. During the same period, the proportion of rural secondary vocational schools nationwide decreased from 32.7% to 28.4%, and the proportion of full-time teachers dropped from 31.5% to 26.9%, reflecting a trend of relative weakening in the allocation of resources for rural vocational education, which has failed to establish a structural relationship with economic and social development.

B. The V-shaped Investment Structure within the Education System

The allocation of educational funding in China is a “V-shaped” structure that “emphasizes both ends and neglects the middle,” meaning that investment in basic education and higher education is relatively sufficient, while secondary vocational education is notably weak. In 2012, the proportion of national educational expenditure to GDP exceeded 4% for the first time, with higher education and primary education accounting for 1.46% and 1.38% respectively, while vocational education accounted for only 0.35%. Vertical comparison shows that the proportion of funding for vocational education is far lower than that for universities and primary schools; horizontal comparison also indicates that its expenditure level is lower than that of ordinary senior high schools at the same level (Figure 1). This institutional preference not only limits the development space for secondary vocational education but also leads to “educated unemployment” and structural imbalances in the labor market. Research shows that government funding for senior secondary education has a “crowding-in effect” on the educational expenditure of rural residents, and the current insufficient investment limits the structural adjustment function that vocational education should perform.

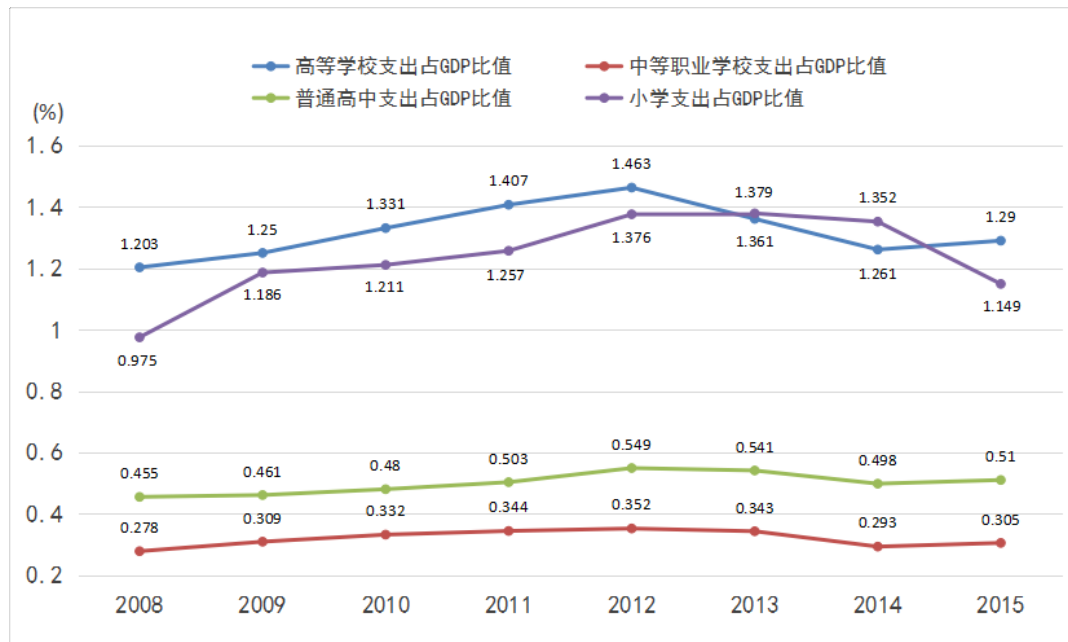


Figure 1 Proportion of Funding for Various Education Sectors to GDP
(Data Source: Educational Finance Statistical Yearbook of China 2009-2016)

C. Internal Fragmentation and Content Mismatch within the Vocational Education System

A binary divide exists within the vocational education system between academic education and vocational training. While secondary vocational education institutions have reached a certain scale, vocational training for members of society remains severely inadequate. In rural areas, vocational training, a key vehicle for addressing the transformation of landless farmers and surplus rural labor, with an average annual return rate close to international levels (approximately 9%), has long been marginalized. Furthermore, two major structural issues exist in rural vocational education. First, the curriculum lags behind, with an overemphasis on traditional agricultural subjects, making it difficult to meet the demands of modern agriculture and emerging industries. Second, there is an imbalance between practical and theoretical instruction. Insufficient theoretical knowledge among students constrains the sustainable enhancement of their professional competitiveness, further weakening vocational education's capacity to serve industrial transformation.

IV. Institutional Causes of Non-equalization in Vocational Education Public Services

To systematically explain the underlying mechanisms of non-equalization in vocational education public services in China, this paper constructs an analytical framework from an institutional perspective, progressing from macro to micro, and from historical to contemporary. Firstly, it analyzes how the urban-rural dual household registration system and its derivative urban-biased policies shaped the initial pattern of non-equalization. Secondly, it reveals the structural contradictions arising from the mismatch between administrative responsibilities and fiscal authority under the fiscal decentralization system. Finally, it demonstrates the dual constraints posed by the overall insufficiency of educational investment and the defects in the transfer payment system on achieving equalization. Through this progressive analysis, the aim is to clarify the causal chain between institutional factors and the phenomenon of non-equalization, providing a basis for subsequent pathway optimization.

A. Institutional Binary Segmentation and the Inertia of Urban-Biased Policies

The institutional design of the urban-rural duality is the historical root of non-equalization in vocational education. The household registration system formed during the planned economy era artificially divided urban and rural identities, restricted free population movement, and led to the allocation of educational resources based on household registration. Within this institutional framework, the school-age population in rural areas was confined to receiving education within their localities, while the children of migrant workers faced high costs for cross-district schooling, creating initial inequality in educational opportunities between urban and rural areas. Public policies further reinforced this pattern. Based on rational choices concerning cost efficiency and the influence of interest groups, government resources have long been tilted towards urban areas. The institutional arrangements during the industrialization strategy systematically sacrificed rural interests, resulting in an imbalance in the allocation of vocational education resources between urban and rural areas and the continuous deterioration of the development environment for rural vocational education.

B. The Imbalance in Authority-Responsibility Allocation under the Fiscal Decentralization System

The mismatch between administrative responsibilities and fiscal authority in vocational education exacerbates regional development disparities. After the tax-sharing reform, the primary responsibility for vocational education funding was decentralized to local governments, creating a pattern where “the central government controls finances, while local governments handle affairs.” However, unbalanced regional economic

development directly constrains the capacity of local fiscal investment, making vocational education funding in less developed regions heavily reliant on unstable transfer payments. To maintain operations, some institutions are forced to misappropriate per-student funding, reflecting the lack of an institutionalized guarantee mechanism. This separation of authority and responsibility also leads to structural supply-demand mismatches—Rural areas urgently need agricultural technology training, but vocational colleges still focus primarily on academic education, with teaching content disconnected from industry needs, creating a contradiction where “demand exists without supply” and “supply exists without demand” coexist.

C. The Dual Constraints of Insufficient Investment and the Transfer Payment System

The overall insufficiency of educational funding is a fundamental factor constraining the equalization of public services in vocational education. According to calculations based on data from the China Educational Finance Statistical Yearbook, the average annual growth rate of China's government-appropriated education funds from 2013 to 2022 was approximately 7.82%, maintaining a trend of continuous growth. However, despite the rapid increase in total investment, its proportion to GDP and its distribution structure across different educational stages remain key issues constraining the equalization of public services in vocational education. Against the backdrop of overall insufficient investment, vocational education funding appears even scarcer due to the influence of an investment structure that “emphasizes basic and higher education while neglecting secondary vocational education.” The funding allocation mechanism further widens the urban-rural gap. Research indicates that local government investment

in education exhibits significant path dependence, with regions historically having higher investment levels continuously receiving more resources. This mechanism, superimposed on the urban-rural dual structure, leads to limited educational funds continuously tilting towards urban areas, leaving rural vocational education in a state of chronically low investment. In some areas, instances of misappropriated per-student funding even occur. Insufficient investment forces the development of vocational education to overly rely on central fiscal transfer payments. China currently implements a single vertical transfer payment system. While this is conducive to implementing central policy intentions, it places high demands on central fiscal capacity and regulatory capability. Against the backdrop of the limited proportion of central fiscal revenue, relying solely on vertical transfer payments makes it difficult to effectively balance regional fiscal disparities, constituting another institutional obstacle hindering the equalization of public services in vocational education.

V. The Pathway for Promoting Equalization of Public Services in Vocational Education

The equalization of public services undergoes a hierarchical and phased dynamic process. Therefore, equalization in vocational education does not narrowly refer to achieving balance in public services between urban and rural areas or across structures. Rather, it is dynamically manifested as a fundamental consistency in the level of vocational education public services enjoyed by residents in different regions, enabling both urban and rural residents to obtain equal educational opportunities, quality, and quantity, and to enjoy basically equitable public educational resources. Consequently, achieving equalization of public services in vocational education requires

unified institutional arrangements by the public sector regarding the most basic public services. To effectively address the urban-rural disparities, regional imbalances, and structural contradictions present in China's vocational education public services, systematic reconstruction is needed across four dimensions: the institutional system, resource allocation, governance structure, and service models, thereby constructing a holistic pathway for promoting equalization.

A. Strengthen Top-Level Design to Construct an Integrated Institutional System

The equalization of public services in vocational education primarily depends on establishing a unified and authoritative institutional framework, clarifying standards and delineating responsibilities at the national level, providing rigid constraints and institutional guarantees for equalization.

1. Establish National Benchmarks for Equalization

The vast disparities in vocational education public services between different regions and urban-rural areas stem partly from the lack of nationally unified, mandatory minimum standards. Priority should be given to formulating and implementing the National Standards for Vocational Education Public Services. These standards should cover at least three core areas.

First, per-student funding standards, clearly defining the minimum per-student allocations from various levels of government and their growth mechanisms, thoroughly eliminating the arbitrariness of "different policies for different localities, different standards for different schools." Second, teacher allocation standards, stipulating core indicators such as student-teacher ratios, the proportion of "dual-qualified" teachers (with both teaching credentials and industry experience), and the duration of professional teachers' enterprise

practice, ensuring baseline teaching quality. Third, facility and condition standards, setting quantitative requirements for school buildings, training equipment, and information technology infrastructure.

The establishment of such standards aims to ensure that all learners, regardless of location, have access to a “guaranteed minimum” and qualified vocational education service. These standards must be rigidly linked to fiscal guarantee mechanisms. A mechanism of “standard determination, budget guarantee, and dynamic adjustment” should be established, using the national standards as the core basis for central and provincial fiscal transfer payments.

2. Deepen the Reform “Streamlining Administration, Delegating Powers, Improving Regulation, And Optimizing Services” and Clarify Government Responsibilities

Achieving equalization goals relies on governments at all levels forming a governance synergy with clear responsibilities and efficient coordination.

To address the current issues of “overlapping responsibilities” and “excessive responsibilities at the grassroots level,” it is imperative to deepen the “streamlining administration, delegating powers, improving regulation, and optimizing services” reform, with the core being strengthening the primary responsibility of provincial-level coordination.

The central government should focus on macro-planning, standard-setting, and the implementation and supervision of nationally significant projects. Meanwhile, responsibilities such as regional resource layout, school establishment, and program planning should be substantially delegated to provincial governments, accompanied by corresponding fiscal authority.

Establishing a List of Administrative Responsibilities and Expenditure Obligations for Vocational Education Public Services is necessary. This list should detail the various responsibilities from the central to county levels and the corresponding sharing ratios of expenditure obligations, particularly specifying the transfer payment responsibilities of central and provincial finances for rural, ethnic minority, and underdeveloped regions. This achieves “devolving administrative responsibilities while elevating fiscal capacity,” fundamentally preventing imbalances in public service provision caused by uneven local fiscal strength.

B. Innovate Resource Allocation to Establish a Fair and Efficient Supply Mechanism

Under a unified institutional framework, mechanism innovation is essential to allocate limited public resources more equitably and efficiently, focusing on solving the problems such as “urban bias” and “structural imbalance.”

1. Optimize the Structure of Fiscal Investment and Payment Methods

The fiscal transfer payment system is a key lever for adjusting regional disparities. The direction of reform is shifting from the traditional “base number method” to a more scientific “factor method.” When allocating funds, comprehensive consideration should be given to factors such as regional population size, fiscal capacity, cost differences, existing resource stock, and service difficulty coefficients, making fund allocation more accurately reflect actual needs and costs.

Furthermore, exploring the establishment of a special “Vocational Education Performance-based Transfer Payment” fund is advisable. This fund would reward regions achieving significant results in promoting employment, serving industries, and achieving high-quality poverty alleviation, creating

a dual incentive mechanism that “ensures basics and promotes development.”

2. Promote Digital Enablement to Build a Smart Vocational Education Platform

Digital technology provides revolutionary means for achieving low-cost, wide-coverage access to high-quality resources. National efforts should be made to build a national smart vocational education platform, integrating and aggregating high-quality resources such as courses, virtual simulation training projects, and digital teaching materials developed by top vocational colleges and industry enterprises nationwide.

These resources should be made freely available to all vocational schools, especially those in resource-scarce rural and central-western regions. This is equivalent to building a “digital expressway” directly connecting under-resourced schools to high-quality educational resources.

C. Stimulate Institutional Vitality to Build a Pluralistic and Collaborative Governance Structure

Vocational education possesses cross-boundary attributes. The high-quality development of it cannot rely on the government alone. It is essential to stimulate the vitality of social forces and construct an ecosystem of collaborative governance involving multiple stakeholders.

1. Improving Institutional Incentives for Social Force Participation

Enterprises are the most important demand side and cooperative partners in vocational education. Efforts should be actively made to promote legislation on the integration of industry and education in vocational education, legally clarifying the rights, responsibilities, and obligations of enterprises in vocational education.

For instance, a combined incentive policy of “tax credit + special additional deduction” could

be implemented for enterprise expenses invested in vocational education. Enterprises deeply involved in co-building training bases, jointly developing teaching standards, and accepting student internships could be certified and awarded the title of “Industry-Education Integration Enterprise,” accompanied by preferential policies in finance, land use, etc.

2. Empowering Vocational Schools with Autonomy

Vocational schools are the final delivery units of public services and must be granted the flexibility and autonomy to respond to market changes. The core is to implement and expand the autonomy of vocational schools in areas such as program setup, teacher recruitment, and salary distribution.

Schools should be allowed to independently establish and dynamically adjust program directions based on regional industrial planning and the development of new business formats. Within the approved personnel quota, schools should have the autonomy to recruit professional course teachers and explore competitive salary systems to attract skilled master craftsmen to teach.

D. Optimizing Service Provision to Improve the Demand-Oriented Cultivation Model

The ultimate effectiveness of public services is reflected in the satisfaction of the service recipients—students and society. Therefore, it is imperative to shift vocational education from a “supply-driven” to a “demand-oriented” approach, constructing a flexible and open modern vocational education system.

1. Build a Vocational Education System for Rural Revitalization

To serve the national rural revitalization strategy, proactive action must be taken. The key lies in promoting the functional transformation of county-level vocational education centers. They should evolve from single-purpose academic

education institutions into regional comprehensive service platforms integrating academic education, technology extension, labor transfer training, community education, and cultural services. They should become cultivation hubs for technical and skilled talents within the county, waystations for the transformation of agricultural scientific and technological achievements, and driving forces for rural cultural development. There should be close alignment with the development needs of the entire modern agricultural industrial chain, dynamically updating the vocational education program directory, with prioritized support for programs related to emerging fields such as smart agriculture, green agriculture, rural homestay management, rural e-commerce, and cold-chain logistics for agricultural products. Through policy guidance and special funding support, vocational schools should be encouraged to develop and strengthen agriculture-related programs, providing precise talent support for comprehensive rural revitalization.

2. Establish a Lifelong Vocational Skill Training System

In an era of accelerating technological iteration, one-time school education can no longer meet individuals' lifelong development needs. It is essential to break down the barriers between academic education and vocational training to establish a lifelong vocational skills training system that spans entire careers.

The comprehensive implementation of the "1+X" certificate system should be promoted, establishing personal learning outcome accounts to realize the certification, accumulation, and conversion of different learning experiences and work achievements, thereby building an "interchange" for talent growth. For key groups such as migrant workers, veterans, laid-off and

unemployed individuals, and individuals with disabilities, the government should innovate public service provision methods. By analyzing their employment needs through big data, modular menu-style "vocational training packages" can be developed. The widespread adoption of "vocational training vouchers" is recommended, placing the choice in the hands of the learners themselves, allowing them to independently select qualified training institutions and courses, with settlement via vouchers. This approach can precisely meet personalized needs while, through the introduction of market competition mechanisms, incentivize training institutions to improve the quality of training.

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