

Analysis of Shandong Province's International Student Scholarship Investment (2019-2023)

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Abstract:

Shandong province experienced a dramatic decline in investment in scholarships for foreign students during 2019-2023. The total amount of scholarships reached its peak in 2019, but due to factors such as the pandemic, the funding significantly decreased in the following years. This study analyzes the data on scholarship funding for foreign students published by the Shandong Provincial Department of Education from 2019 to 2023. It further examines the distribution of scholarships across different regions and institutions, revealing issues such as reduced funding and unequal distribution in the implementation of the scholarship policy. The research results indicate that resources are primarily concentrated in developed cities such as Jinan and Qingdao, as well as in general undergraduate institutions, while economically underdeveloped areas and vocational colleges receive relatively weak support. Based on this situation, this study proposes recommendations to optimize the scholarship distribution mechanism in order to promote balanced development in the internationalization of education in Shandong Province.

Keywords: Shandong Province; foreign student scholarships; educational internationalization; funding investment; policy optimization

1. Introduction

In the context of increasingly deepening globalization, the internationalization of education has become an essential strategic means for countries to promote economic, cultural, and social development. As an important bridge for international exchange, foreign students are of great significance in enhancing the in-

ternational influence of their host country. As an important participant in global higher education, China has achieved significant results in attracting foreign students in recent years. To implement the National Medium--and Long Term Education Reform and Development Plan (2010-2020), the Chinese Ministry of Education launched the "Study in China Plan" on September 21, 2010. Since 2011, Shandong Province

has also established the “Provincial Government Scholarship for Foreign Students” to encourage outstanding foreign students to study in China. As scholarship policies have been implemented, attention has increasingly focused on their actual effects, fund utilization, and the specific challenges encountered.

Existing research on local government scholarships in China mainly focuses on three aspects: policy implementation and effectiveness, scholarship management and quality optimization, and policy design and reference to foreign experience. In terms of the implementation and effectiveness of local government scholarship policies, Wang Zhihao’s research pointed out that local scholarships in Jiangsu Province have enhanced the internationalization level of education, but there are issues such as inefficient policy design and implementation in the implementation process [1]. In terms of scholarship management and quality optimization, Tu Ziling’s research on scholarships in Guangzhou universities reveals the differences in scholarship management and distribution between public and private universities, pointing out that the number and funding of scholarships in public universities are relatively high, while private universities have deficiencies in award standards and amounts, which adversely affects the incentive effect of scholarships [2]. In terms of policy design and foreign experience reference, Yang Zhou assessed in his research the effectiveness of local scholarships for international students in attracting them to China and made suggestions for reform directions [3]. These scholars’ research is representative of their respective fields, but currently, there is a gap in research regarding the investment of local government scholarships for international students in China both domestically and internationally. This study aims to focus on the investment of scholarships for international students in Shandong Province as an example, and then analyze and propose improvement suggestions.

This research adopts a data analysis method to collect and analyze the data of international student scholarship

investment by the Shandong Provincial Department of Education from 2019 to 2023 and evaluates the actual situation of fund investment and use through statistical methods. Through a comprehensive and in-depth analysis of the scholarship investment for international students in Shandong, the study offers theoretical support for optimizing scholarship policies in the province. It identifies problems in the implementation process of the policies and proposes optimization suggestions, aiming to make the scholarship policies for international students more scientific and rational. It will not only fill a research gap regarding local government scholarship investments for international students in China but also play a role in enriching the theoretical research of educational internationalization. Additionally, it offers insights and guidance for improving scholarship investments by other local governments.

2. Analysis of Scholarship Investments for International Students in Shandong Province (2019-2023)

2.1 Total Investment

As shown in Fig. 1, the total amount of international student scholarships in Shandong Province halved between 2019 and 2023, with a total decrease of 57%, showing a significant downward trend. Specifically, scholarships were decreasing from 2019 to 2021 and reached its lowest point in 2021. There has been no fluctuation in scholarships between 2022 and 2023, consistent with 2021. It was known that from 2019 to 2023, the outbreak of the pandemic lasted for more than 4 years. During this period, due to the economic downturns and international travel restrictions caused by the epidemic, a significant number of international students studying in China were lost, which negatively impacted the scholarship investment for international students in Shandong Province [4].

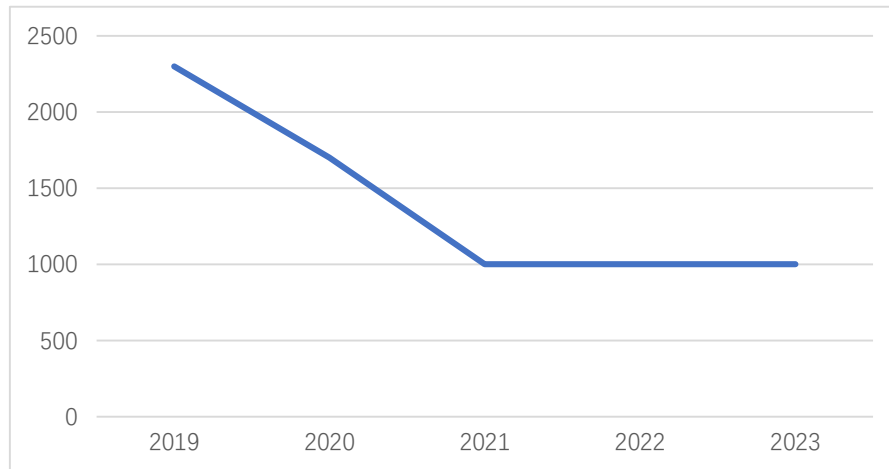


Fig. 1 Total Amount of Scholarships for International Students in Shandong Province (2019-2023) [5].

2.2 Regional Distribution Analysis

Shandong Province has 16 prefecture-level cities in total. As shown in Fig. 2, Jinan, the provincial capital, with 12-14 universities, occupied a significant resource advantage, while Qingdao had 6-7 universities. These two cities com-

bined accounted for a considerable portion of scholarship allocations. Apart from Weifang (4 universities) and Yantai (3 universities), most cities had only 1-2 universities, with Dongying and Heze having none. This indicates a significant imbalance in scholarship allocation across different regions.

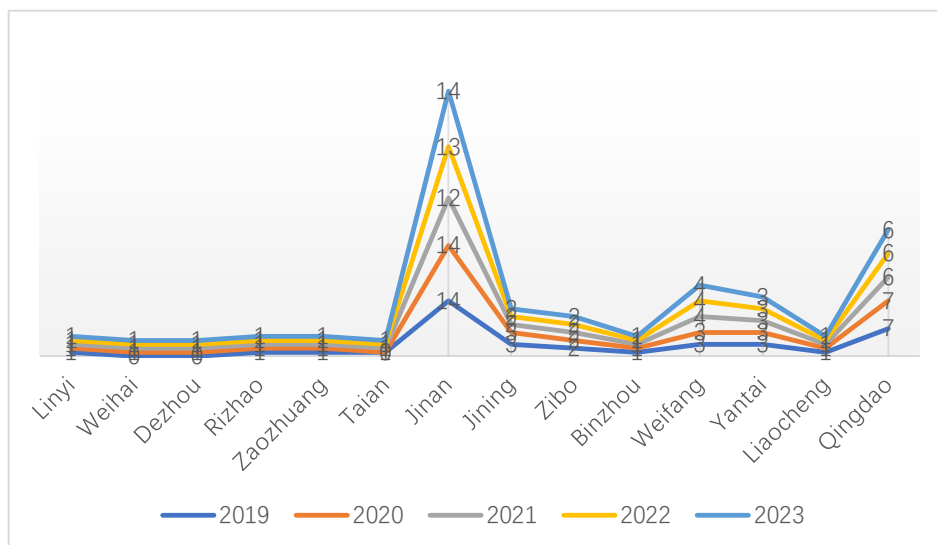


Fig. 2 Distribution of Scholarship Funds and the Number of Institutions in Each Prefecture-level City of Shandong Province [5].

As shown in Table 1, Jinan and Qingdao have always held a leading position in the distribution of scholarship funds, with the combined proportion of scholarship funds in the two cities exceeding 50% in the past five years. During this period, the overall proportion of Jinan has decreased, while Qingdao's has slightly increased, with a relatively minor overall change. The proportion of medium-sized cities such as Weifang and Yantai has fluctuated, though

these changes are relatively small. Cities with less scholarship acceptance, such as Dezhou and Weihai, have seen an increase in the proportion of scholarships, but the change is minimal, within 1% of the total amount. It can be observed that Shandong Province presents an uneven distribution of scholarships for foreign students in the provincial government, with large cities dominating and medium-sized cities having a small proportion, while small

cities are negligible. The differences between these types of cities are significant.

Table 1. Changes in Scholarship Distribution Proportion Among Prefecture-level Cities in Shandong Province [5].

	2019	2020	2021	2022	2023
Jinan	37.02%	37.18%	38.30%	36.90%	33.00%
Qingdao	19.02%	19.68%	18.20%	17.50%	21.20%
Yantai	8.30%	10.27%	10.50%	9.50%	6.50%
Weifang	7.15%	7.53%	6.50%	8.10%	11.80%
Weihai	0.00%	0.38%	0.20%	0.50%	0.90%
Dezhou	0.00%	0.77%	0.30%	0.30%	0.30%

2.3 Analysis of Institutional-Level Differences in Scholarship Distribution

As shown in Table 2, from 2019 to 2023, the proportion of full-time regular undergraduate schools in Shandong Province that received the “Provincial Government Foreign Student Scholarship” exceeded 71%, while vocational-

al colleges remained below 29%. The number of regular undergraduate schools was much higher than that of vocational colleges. The significant difference in quantity between the two indicates a clear bias in the scholarship distribution at the institutional level towards undergraduate institutions.

Table 2. Number of Regular Undergraduate and Vocational Colleges Receiving Scholarships from 2019 to 2023 [5].

	2019	2020	2021	2022	2023	Total Number of Institutions (Non-duplicated)
Regular Undergraduate	28	28	28	29	29	32
Vocational Colleges	10	11	9	9	10	13
Percentage of Regular Undergraduate	73.68%	71.79%	75.68%	76.32%	74.36%	71.11%
Percentage of Vocational Colleges	26.31%	28.20%	24.32%	23.68%	25.64%	28.89%

As shown in Table 3, the total amount of undergraduate scholarships from 2019 to 2023 has consistently accounted for over 85%, far exceeding that of vocational colleges. In 2021, the proportion of scholarships in vocational colleges reached a trough of 5.8%, coinciding with a period

of significant global economic downturn. Over the past five years, the total amount of vocational colleges has remained below 15%, far lower than that of undergraduate colleges. This indicates a clear inequality in the allocation of scholarship funds between different institutional levels.

Table 3. The proportion of Scholarship Funds distributed to Regular Undergraduate and Vocational Colleges from 2019 to 2023 [5].

	The proportion of Total Funds for Regular Undergraduate Institutions (%)	Proportion of Total Funds for Vocational Colleges (%)
2019	90.76%	9.24%
2020	89.15%	10.85%
2021	94.20%	5.80%
2022	92.40%	7.60%
2023	85.10%	14.90%

The above observations indicate that from 2019 to 2023, regular undergraduate institutions dominated both in the

number of institutions and the total amount of scholarships distributed under the Shandong Provincial Government's scholarships for international students. Although the number and proportion of scholarship funds allocated to vocational colleges increased in 2023 compared to 2019, regular undergraduate institutions still maintained an absolute dominant position. Additionally, the proportion of funds allocated to vocational colleges remained much lower than their proportion of institutions, further reflecting a bias towards undergraduate institutions in scholarship distribution.

3. Analysis of Scholarship Distribution Issues

3.1 Institutional-Level Imbalance

There is a significant imbalance in the distribution of scholarships for foreign students in Shandong Province from 2019 to 2023. Vocational colleges consistently account for less than 29% of scholarship recipients, and their total scholarship amount does not exceed 15%. In contrast, regular undergraduate institutions, which account for over 71% of the total, can receive over 85% of scholarships and even reach 94.2% in 2021. This resource imbalance seriously affects the international competitiveness of vocational colleges and directly hinders the ability of Shandong vocational colleges to attract and cultivate internationally skilled talents.

The uneven distribution of scholarships has led to a disadvantage for vocational colleges in attracting international students. Scholarships are a crucial factor for international students when choosing colleges, but due to the scarcity of scholarship resources, vocational colleges struggle to provide sufficient financial support for international students. This directly weakens the willingness of foreign students to choose vocational colleges, thereby limiting the position and influence of vocational colleges in the international education market.

In addition, this imbalance also restricts the internationalization potential of vocational education in Shandong Province.

Vocational colleges cultivate skilled and applied talents urgently needed by society, but their disadvantage in distributing international student scholarship resources makes it difficult for these colleges to attract high-quality international talent, which affects their competitiveness in the global education market. This issue reflects the government's policy bias in the development of higher education, and excessive bias towards regular undergraduate colleges may hamper the internationalization process of

vocational colleges, thereby affecting the overall development of vocational education in Shandong province.

3.2 Regional Balance Issue

Between 2019 and 2023, the distribution of scholarships for foreign students in Shandong Province presented a pattern of "two major cities, multiple medium-sized cities, and several small cities". Among them, Jinan and Qingdao accounted for over 54% of the scholarship share in the province, while small cities such as Weihai had a share of less than 1%. This distribution pattern highlights severe regional balance issues.

Jinan, as the provincial capital city, enjoys notable policy advantages, while Qingdao, as a sub-provincial city and international comprehensive transportation hub, is also in a leading position in resource acquisition. This allows both cities to establish and expand more higher education institutions, attract more government and social funding, and further enhance their education and research capabilities. However, the centralized allocation of these resources has also brought about significant regional development imbalances. Due to the concentration of resources, Jinan and Qingdao have attracted more outstanding students and talents, forming a situation where the "strong get stronger". However, other prefecture-level cities, especially small and medium-sized cities with limited resources, are facing the dilemma of lagging development. Due to the limited number of universities, other cities have limited investment and attractiveness in international education, making it difficult to compete with Jinan and Qingdao, which further weakens their position in the global education market.

The imbalance in resource allocation will further widen the development gap between regions, especially in Dongying and Heze cities, which have no universities. These areas have almost lost the opportunity to promote local economic development through education and research. To address this issue, it is urgent to re-examine the scholarship distribution policies to promote more balanced development across the province.

3.3 Fiscal Contraction under the Background of Economic Downturn

The pandemic has had a significant impact on higher education systems around the world. Universities in Shandong Province have not been spared, especially in terms of funding. Due to restrictions on international travel during the pandemic, many international students are unable to enter Shandong Province, which directly leads to a decrease in tuition income from international students. The decline in the number of international students also

meant fewer scholarship applicants, resulting in reduced funding.

The pandemic has led to an economic downturn and a decrease in government revenue. Simultaneously, to cope with the pandemic, the government has increased its spending on healthcare and social security, which has resulted in a compression of fiscal appropriations for higher education. The local financial strain in Shandong Province is particularly reflected in the reduction of funding for universities. In 2020 and 2022, the general public budget education funds for higher education in Shandong Province decreased by 1.47% and 1.88% respectively [6]. This reflects the increasing pressure on education finance in Shandong Province, which adversely affected scholarships for international students.

Furthermore, international travel restrictions during the pandemic severely impacted both short-term and long-term exchange programs with China. In terms of research funding, the national financial expenditure on science and technology has shown slow growth or even decline over the past five years. The national fiscal expenditure on science and technology decreased by 5.8% in 2020, increased by 6.7% in 2021, and increased by 3.4% in 2022 [7]. Compared to the increase of over 10% before the pandemic, this marked a significant slowdown in funding increases [7].

The pandemic has also caused a slowdown or suspension of the approval process for many research projects, resulting in delays in the disbursement of research funding. Many planned scientific research projects were forced to be postponed, directly affecting the research activities of universities and the utilization of related funds. Additionally, restrictions on international mobility and collaboration disrupted or canceled many multinational research projects, which directly impacted the operations of projects reliant on international cooperation funding, further hampering the utilization and reimbursement of these funds.

4. Suggestions

As noted earlier, Shandong Province's government scholarships for international students face challenges such as uneven distribution among different institutions, significant regional disparities in resource allocation, and insufficient support for vocational institutions. Therefore, the following improvement suggestions are proposed to optimize the allocation effect of scholarships.

It is recommended that Shandong Province enhance its support for vocational colleges. Currently, regular undergraduate colleges receive the majority of scholarship resources, while vocational colleges have a relatively lower

share. It is suggested that the provincial government further increase its support for vocational colleges in future scholarship allocation. This measure would not only ameliorate the internationalization of vocational colleges but also meet the growing global demand for skilled talents and promote the development of vocational education.

Shandong Province should promote equitable regional resource allocation. The economic disparities among different regions in Shandong Province are significant. For instance, Jinan and Qingdao, as the two most economically developed cities, have scholarship investment levels exceeding half of Shandong Province's investment, while Weihai and Dezhou combined account for less than 2%. It is recommended that the provincial government provide greater support to economically underdeveloped regions, assisting these areas' universities to enhance their educational quality and attract international students. This will contribute to narrowing the education gap between regions and achieve educational equity throughout the province.

Shandong Province should strengthen international publicity and cooperation. It is suggested to increase the publicity of Shandong Province's scholarship policy in the international education market, enrich cooperation with foreign universities, and expand and optimize student sources [8].

Shandong Province should increase scholarship funding. Given the significant decline in scholarship investment during the epidemic period and the basic end of the epidemic in 2023, while scholarships have not changed compared to 2022, it is recommended that the provincial government gradually expand its support for educational policies such as scholarships based on policy recovery [9]. This is not only a compensation for insufficient investment in previous years, but also an indispensable measure to attract more international students and enhance the competitiveness of universities in Shandong Province in the global education market.

Shandong Province should diversify scholarship funding sources. The existing scholarships mainly rely on education funding, and their implementation effect may be negatively affected in areas with fiscal difficulties. To mitigate this risk, Shandong Province can refer to the international experience, such as raising funds through government and enterprise cooperation [3]. In addition, measures such as waiving tuition fees or refunding tuition fees can be considered to alleviate the financial pressures while ensuring the effective implementation of scholarships [3].

5. Conclusion

This study indicates that investment in scholarships for international students in Shandong Province has significant-

ly decreased from 2019 to 2023, mainly due to the impact of the pandemic. The study also revealed a long-standing imbalance in scholarship allocation, with developed cities such as Jinan and Qingdao, as well as regular undergraduate institutions, receiving disproportionate resource allocation. To address these challenges, it is recommended that Shandong Province increase its support for vocational colleges, promote a more equitable distribution of regional resources, and diversify scholarship funding sources. These measures will help improve the internationalization level of education and ensure the balanced development of scholarship opportunities throughout the province.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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