

Research on China's Provincial Educational Inequality and its possible solutions

——In view of the imbalance of educational resources in Shandong Province

Abstract

The subject of this article is to explore the main causes and internal mechanisms of education inequality in Shandong Province. The article focuses on the analysis of regional education investment and provincial policies, aiming to evaluate the educational funding inputs in different regions of Shandong province and the effects of various policies with regard to Shandong education in recent years. At the same time, based on the analysis results and remaining problems, further policy recommendations are given.

1. Introduction

1.1 Defination

Educational inequality, which exists all over the world, means that students with the same learning ability cannot get the same or similar educational resources. There are many factors leading to the occurrence of educational inequality, such as government policies, family wealth, implicit bias towards the race or ethnicity of the student, and the resources available to the student and their school.

1.2 Background

In recent years, China's economy has developed rapidly, but the economic development speed of different regions is not the same due to geographical location and other factors. Differences in economic development have led to the emergence of educational inequality between regions. In areas with better economic development, there are more well-educated adults. Their children are more likely to receive a better family education. At the same time, good teachers will choose to find work in this area. On the contrary, in areas with relatively backward economic development, there is a large loss of talents, causing local children not to have access to good education. And this in turn hindered the development of the regional economy. Taken together, inequality in education will exacerbate the gap between the rich and the poor between regions.

Shandong has a population of over 100 million, accounting for 7.19% of the national population. The economic development of the eastern coastal cities of Shandong Province is relatively fast, while the economic development of the inland areas in the central and western regions is relatively backward. At the same time, Shandong, as the hometown of Confucius and Mencius, is also a major education province in my country, with more than 600,000 people taking the college entrance examination each year.

Judging from the results of previous years, the undergraduate acceptance rate in the eastern coastal areas is often higher than that in the central and western inland areas in Shandong province. The main reason for this difference is not that students in the

eastern region work harder, but that they have more educational resources and opportunities.

In recent years, the Chinese government is paying more and more attention to education issues. Shandong provincial government has promulgated many relevant policies to deal with the problem of unfair educational resources. Some policies are well implemented, but some of them are not satisfactory.

2.Current situation analysis

This part is based on the analysis of the National Bureau of Statistics' annual education expenditures in various parts of Shandong Province. The data contains information on the educational expenditures of 17 cities in Shandong Province in 2020.

2.1 Figure 1: Public finance education expenditure

In Figure 1, we show the public finance education expenditure in these 17 cities. The top 4 cities (Qingdao, Weifang, Laiyang and Yantai) are all eastern coastal cities. The other two cities with educational expenditures of more than 10,000 million yuan are Jinan, the capital of Shandong Province, and Jining, its affiliated city. Most of the cities with education expenditures less than 10,000 million yuan are inland cities in the central and western regions.

It can be concluded from the figures that the eastern coastal cities with better economic development are also far ahead in education fiscal expenditure. The number

of students in each city is roughly the same, which means that students in eastern coastal cities have richer educational resources.

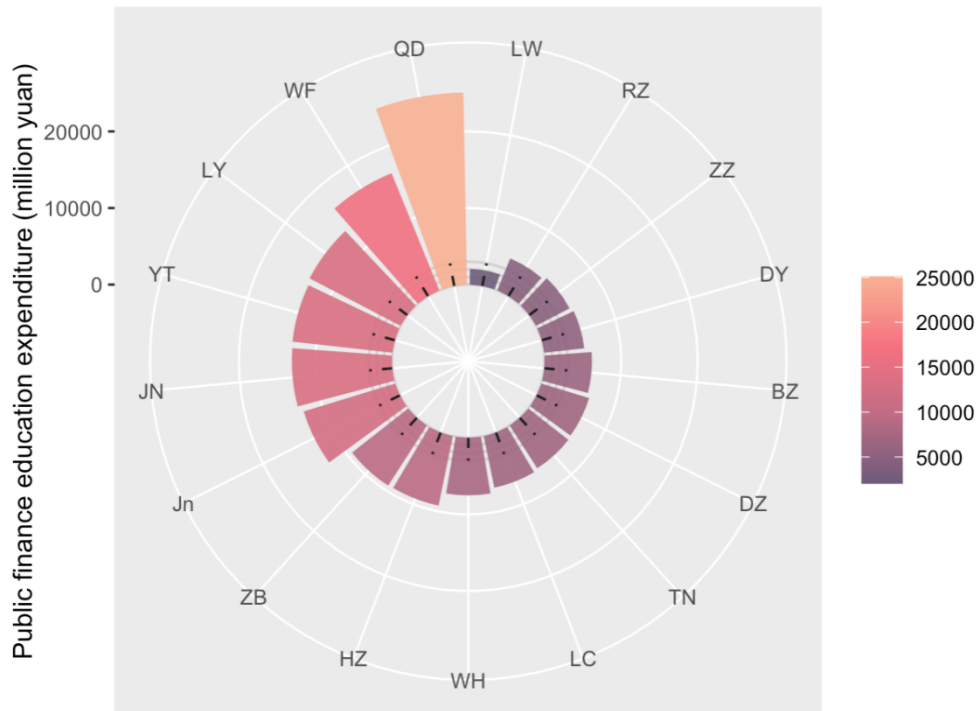


Figure 1: Public finance education expenditure (million yuan) in 17 cities of Shandong province.

2.2 Figure 2: The gap between education resources in eastern and western areas

In order to explore whether the gap is being enlarged, I conducted the following analysis. First, calculate the increase in public finance education expenditure this year over the previous year (%). Then calculate how much current fiscal revenue this year has increased over the previous year (%). Finally, use public finance education expenditure increased this year over the previous year (%) to subtract regular fiscal revenue increased this year over the previous year (%) to get the comparison of the growth rate of public finance education expenditure and regular fiscal revenue

(percentage points). The larger the value, the more attention that government pays to the financial investment in education. If this value is negative, it means that the proportion of education expenditures has fallen. The result is shown in Figure 2.

The x-axis in the figure is the difference in growth rate. The more to the right, the more the government pays more attention to education expenditure. The y-axis is different cities. The different colors indicate the area the city belongs to. Red represents the east and green represents the west.

It can be clearly seen from the figure that most of the differences in eastern cities are positive, and only one (Yantai) is negative. However, the difference in most western cities is negative, and the absolute value of the difference is very large, indicating that the proportion of education investment in these cities is shrinking sharply.

In summary, the eastern cities spend more in education than the western ones, and they are still growing steadily. Even if fiscal revenue increases in the western region, it will be spent more on infrastructure and other aspects than education expenditure. Therefore, the gap in education inequality between the east and the west is gradually widening.

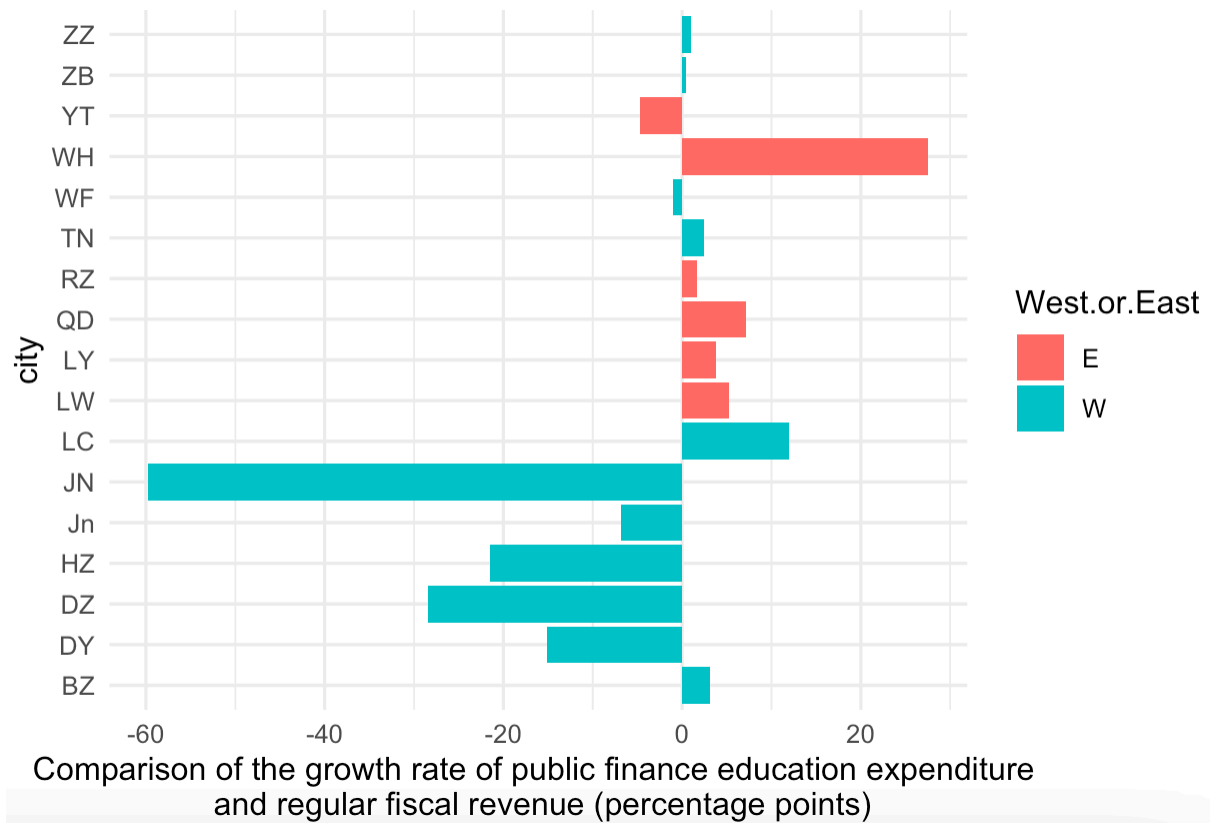


Figure 2

The issue of economic development in the relatively backward areas of Shandong Province is a long-term problem. The state has made policy support and adjustment for it, but the state's economic and resource support is limited. We can't wait for these areas to start considering the problem of education after solving the economic ones.

In the following policy analysis, it can be seen that China has also taken this issue into account. The following policies can be parallel or even complementary to the economic development policies of these regions.

3.Policy analysis

3.1 Overall policy and achievements

The Chinese government has issued a series of preferential policies to solve the education problem. On the whole, the education resources are tilted towards the rural areas to narrow the gap between urban and rural areas.

In 1980s, China began to attach importance to supporting the development of compulsory education in rural regions, and successively implemented a number of projects such as the "Liaoyuan Plan" and "National Compulsory Education Project in Poor Areas" to promote the balanced development of compulsory education between urban and rural areas.

After entering the 21st century, the dual-track policy was ended and the integration of urban and rural areas was promoted. In 2015, the rural teacher support plan was implemented to improve the status of rural teachers. The nutrition improvement plan for rural compulsory education students was launched in 2011. By the end of 2017, the national nutrition improvement plan for poverty-stricken counties was fully covered, benefiting 37 million students in poverty-stricken areas.

3.2 Specific policy examples and advantages

In Shandong Province, some specific measures are also helping to reduce educational inequality. The general idea of these policies is to let the developed regions help the backward regions, so as to more effectively solve the problem that the economic development of the backward regions is relatively backward and there is no surplus resources to education in a short time.

(1) Get support from public financial expenditure in developed areas

In response to the call of the country, Shandong Province issued a support education policy in 2016, sending a certain number of teachers from developed areas to underdeveloped areas to support education and provide one-on-one assistance.

For example, Qingdao, the most developed city in Shandong Province, helps the inland city of Heze with school construction and arranges hundreds of teachers to various schools in Heze every year. Although this policy cannot be reflected in the educational expenditures, for the salaries of supporting teachers are still paid by the original regions, it can very well narrow the gap in educational inequality.

In China, most of the student's textbooks, tuition and miscellaneous fees are supported by the state, the gap in educational resources is mainly related to the level and quality of teachers. Sending high-level teachers to schools in underdeveloped areas not only allows students to enjoy high-quality classroom teaching, but also improves the teaching abilities of other local teachers. At the same time, this policy did not bring more economic burdens to the local area. It has truly realized that the first rich will lead to the rich later.

(2) Get support from national public financial expenditure

Similarly, in 2016, Shandong Province began to implement the "teacher training students without expense" policy. The government pays for the university tuition of students, but it requires such students to first go to the government-designated area to work as a teacher after graduation. This policy solves the difficulties of students in

impoverished areas for university education, and at the same time ensures the number of high-level teachers sent to impoverished areas every year, so that the economy and education of the area can be sustainably developed.

In addition to providing high-level teachers for underdeveloped areas, the government will allocate funds to schools in poverty-stricken areas every year to help them improve infrastructure. Other cities in eastern areas will also organize various donation activities. These policies have all contributed to narrowing the gap of educational resources.

3.3 Remaining problems

(1) Insufficient support of family education resources

By all account, teachers and school resources are not enough for students education, family education is equally important.

According to the China Education Panel Survey, which is a nationally representative large-scale follow-up survey project designed and implemented by the China Survey and Data Center of Renmin University of China, educational resources for students at home can make a big difference. The survey pointed out that 80% of middle school students who do not have their own independent desks at home have poor academic performance. More than 90% of children living in cities have independent desks, while less than 45% of children living in rural areas have independent desks at home.

However, there is no policy focusing on students' family learning resources yet. Since adult laborers in underdeveloped areas often go out to work, students do not receive enough care and attention at home. This is a relatively common problem in rural areas of China, not only in Shandong Province.

(2) Insufficient disposable funds of rural marginal primary and secondary schools

The fees paid by students in school include book fees, miscellaneous fees and agency fees. Agency fees mainly include operation fees, teaching auxiliary fees and newspaper fees, but mainly include book fees and tuition and miscellaneous fees. Miscellaneous income is the main source of school public expenditure.

From the investigation of a township primary school in Shandong Province, it is found that since 1990, the primary school in this town has collected miscellaneous fees from students. From 1990 to 1997, each student paid 12 yuan of miscellaneous fees per semester; From 1997 to 1999, the miscellaneous expenses became 30 yuan; Since the second semester of 2004, the miscellaneous fees for lower grades are 80 yuan and 105 yuan for middle and higher grades. Nowadays, the miscellaneous fees charged by primary and secondary schools in Shandong township areas have increased several times over 2004, but the dominance of rural primary and secondary schools over this money has not increased significantly.

Only part of the income from miscellaneous expenses can be used for the education investment of the school, and the other part needs to be handed over to the high-

quality primary schools in the Rural Center. Sometimes, miscellaneous expenses need to be used as entertainment payment during the inspection of leaders.

The money allocated to the Township Central School by the primary and secondary schools in the remote areas of the township is uniformly managed by the principal of the central school. The teaching supplies of the township primary and secondary schools are uniformly purchased by the principal of the central school, and then reimbursed. Part of the reimbursed money is returned to the students, and the other part is still managed by the principal.

From 1990 to now, the growth rate of public funds at the disposal of rural primary and secondary schools in rural areas of Shandong Province is very small. However, relatively speaking, the growth rate of funds handed over from rural marginal schools to central schools is very high. At the same time, the use of the balance managed by the principal of the central school has not been reasonably supervised. We have no way to know whether the money is really used for the development of the school or the principal's personal entertainment. These resources controlled by some individuals have also become a hidden "source of corruption".

This phenomenon reflects that although the education expenditure in backward areas has increased, the internal education income and resources are unequal in this area, especially in the villages in this area. This phenomenon is easy to lead to more education resources for schools in the central area and more shortage of education resources for schools in the marginal area.

(3) Insufficient Vocational Education in rural areas

For quite a long time, people think that general education is only for further education, and they focus on the rate of further education, but they don't pay enough attention to a wide range of ordinary students who can't be promoted to colleges and technical secondary schools in Shandong. The contradiction of "learning is not for using and using is not for learning" in rural education is very prominent. About 10000 high and middle school graduates return to the front line of rural production in Laiwu City, Shandong Province every year. And If we put the perspective on the whole Shandong Province, we will find that more students drop out of primary and secondary schools and return to the countryside or go to the city to do odd jobs every year. However, after leaving the school, these students cannot meet the needs of economic construction for a long time. They have no skills and can only follow the traditional production skills taught to them by their parents.

How to make these people grow into the new force of rural economic development as soon as possible and drive farmers families to get rich is an urgent problem to be solved. We need to realize that the development of general education must not only focus on the "baton" of entering higher education, but pay attention to the cultivation of human ability and the mastery of rural practical technology.

4. Suggestions for the Future

The report first pointed out that the root cause of educational inequality in China is the imbalance of economic development. Then the report shows the current

educational inequality in Shandong Province from the data analysis and points out that the gap is still expanding. What's more, I have sorted out and analyzed the measures and policies issued by Shandong Province in recent years to eliminate educational inequality.

Shandong Province has actively responded to the inequality of education through measures such as supporting education, promoting the "teacher training students without expense" policy, donating money and educational resources, which has achieved relatively good results.

Through the data analysis and current situation analysis in the previous part, we have learned that our country is making up for the lack of educational resources caused by the lack of economic resources in backward areas, but in fact, the strength of this policy is far from enough. Our country should not only allocate the resources of excellent teachers in Shandong Province, At the same time, excellent young teachers should also be transferred from other developed provinces in China, and greater subsidies should be given to these teachers through the national finance or more developed provinces from which teachers come.

Therefore, in view of the imbalance of educational resources caused by the imbalance of economic development presented in the data analysis part, I believe the state has already had policy support, which created great effect. The only thing to do is to increase efforts and accurately target the subsidies to support teachers.

4.1 Suggestions for insufficient support of family education resources

However, in terms of family education resources, students in underdeveloped areas are still far from those in developed areas, and the government has no corresponding policies and measures. The policy recommendations I would like to propose in this regard are mainly aimed at the problem of insufficient family education mentioned in the previous part.

Here, the following policy recommendations are proposed:

(1) The central government should provide precise assistance to poor students, such as basic learning supplies such as desks, extracurricular books at home.

➤ **Possible difficulties and solutions:**

It may be difficult for the state to ensure that these resources can really be distributed to individual students and that these resources can be used to improve students' learning environment. If materials are distributed directly, it is difficult to determine the different material needs of different students. At the same time, the cost of transporting a large amount of materials will be higher for the country; On the other hand, if funds are directly distributed to students, it is difficult to ensure that the money will really be used to buy school supplies. Parents may occupy the funds, or students themselves will use the money to buy entertainment items.

To solve this problem, I believe the state still needs to distribute part of the school supplies directly to students. First of all, the state should make schools count the school supplies that students lack most in their families, and then

the state selects several materials that students need in common for direct subsidies. If it cannot be delivered at the same time, it can be delivered to the school in batches, and then government can arrange supervisors to ensure that the school distributes these learning supplies to individual students.

(2) For left-behind middle school students, the central government should assist schools in setting up special organizations to take care of these students for free after school.

➤ **Possible difficulties and solutions:**

The core problem here is that middle school teachers may not be willing to stay in school to look after these students. Therefore, in view of this problem, the school needs to deal with the salary increase of teachers who stay in school and look after them. This part of the salary needs the financial support of the state, and the school needs to ensure that teachers can get these salary increases.

In addition, we also need to deal with the scheduling of teachers who take care of left behind students, so that teachers can choose to have free time to stay in school to take care of students.

The activities to take care of left behind students should be determined by different schools according to their own conditions. Students can study by themselves or carry out some release activities, but the most important thing

is not to increase the burden on students during this period of time and to abide by the principle of students' voluntary enrollment.

(3) Through network technology, the state should help to establish the relationship between students in backward areas of Shandong and excellent college students in more developed areas, and promote communication between the two sides.

➤ **Possible difficulties and solutions:**

At present, similar measures have been implemented, but the implementation subjects of these measures are still mainly universities and other social organizations, not the state. Therefore, universities and social institutions mainly take this activity as voluntary service, with short cycle and insufficient useful content. If the state allocates some resources to support college students' long-term education support activities in backward areas of Shandong Province, the effect of those activities may be better.

Through the communication, our main purpose is not to help students improve their academic performance, but to give possible help at the spiritual levels.

At present, I am participating in a similar project in our school. In this project, we will communicate with middle school students in different backward areas. Recently, there is an activity called "wish document". We will collect students' wishes and prepare the first New Year gifts for them. The

original intention of such activities is good, but the school needs funds to do these activities, so it often needs the sponsorship of companies and enterprises. We may need to help the company publish advertisements or do similar things when volunteering. Some students dislike doing it, but because the state doesn't have this kind of support, we can only continue to do that at present.

4.2 Suggestions for Insufficient disposable funds of rural marginal primary and secondary schools

Although the government allocates funds to rural primary and secondary schools every year, many problems in these schools remain unresolved. Here, the following policy recommendations are proposed:

(1) For marginal small-scale rural primary and secondary schools, the central government should give more funds to the construction of school infrastructure, especially the construction of canteen and classroom.

➤ **Possible difficulties and solutions:**

Some rural primary schools have few students, often cover a small area and are scattered. How to count these scattered small-scale schools and calculate how much subsidies they need is a difficult problem. This requires the township government to set up a special working group to collect the information of these schools and submit it to the superior department for

evaluation and review. Moreover, rural primary schools in remote areas often do not have close contact with the outside world, so that corruption occurs more frequently. Therefore, the township level government needs to regularly supervise the operation and construction of these schools and check whether the subsidy funds have been used. At the same time, after the construction of classrooms and canteens, the daily operating cost may become a burden for rural schools. These costs should also be subsidized by central government departments.

(2) Establish expenditure management system to record the flow direction of each fund in detail so that ensure students' control over subsidies.

➤ **Possible difficulties and solutions:**

Based on the research in Sun (2005), some funds allocated to rural students are often used elsewhere, but not to improve student life. Some of the funds may be embezzled by local officials in the process of distribution. In the end, there will be little money left for each student. And it is very difficult to record the flow of subsidies. A feasible method is to establish a special bank account system for subsidies. All expenses must go through specific channels, so that if there is an abnormal decrease in the money in the account, it will be recorded. This way can reduce the complexity of bookkeeping.

(3) Change the educational concept in rural areas, increase the publicity of educational laws and regulations, and make parents aware of the importance of education.

➤ **Possible difficulties and solutions:**

If we want to implement the new policy in rural areas, we will encounter many obstacles. In rural areas, due to the relatively backward economic level, parents will let their children help with farm work and housework. They believe that letting children go to school will only cost more money to pay tuition fees, and children can't earn money early to support their families. Their understanding of the national policy of supporting education is not clear enough. We need to make rural parents understand that only by giving students further education and make them learn more knowledge and skills can they find higher quality jobs in the future.

The possible difficulty is that the educational concept of many parents in rural areas is not easy to change. Therefore, we suggest that the village committee should regularly invite college students of rural origin to give lectures on the importance of education in rural areas, let them explain the importance of junior and senior high school education, and encourage parents to support their children to continue to complete their studies.

4.3 Suggestions for Insufficient Vocational Education in rural areas

Although rural areas are most in need of vocational education, many problems in vocational education remain unresolved. Here, the following policy recommendations are proposed:

(1) Offer vocational education courses in junior school, teaching students production skills such as the technique of carpentry, electrician and construction worker.

➤ **Possible difficulties and solutions:**

Due to the backward economic development in rural areas, a large number of professional talents are needed, such as construction workers, electricians, plumbers, etc. However, learning more skills takes more learning time, and the ordinary three-year junior middle school cannot meet the requirements. Shandong Province has implemented a four-year junior high school policy in some pilot cities, such as Weifang, and has achieved good results (Liu and Qin, 1999). This policy ensures that students in rural areas can master a production skill while mastering theoretical knowledge.

Therefore, we propose to implement four-year junior middle schools in the whole rural areas.

(2) Set up diversified vocational education courses, such as adding electronic information, accounting, agricultural technology and so on.

➤ **Possible difficulties and solutions:**

The possible difficulty is that the source of funds of vocational schools is insufficient, and there may not be enough funds to buy corresponding learning tools. Ma and Huang (2020) pointed out that the legal system of rural vocational education in most areas is not sound, the source of funding is single, and funding is insufficient. This is because the government does not realize the importance of vocational education to the economic development of rural areas. Therefore, we need to reform and innovate rural vocational education in terms of improving the legal and policy system. While increasing financial support, the central government should improve the fund management system of vocational education, supervise the whereabouts and sources of each fund, and allocate these funds to different vocational courses in proportion.

We have to improve education quality, so as to form a high-quality development of rural vocational education and to implement rural revitalization.

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