



# A Research on the Fairness of the Student 's Investment in Various Cities of Korea

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## **Abstract**

**Background/Objectives:** The purpose of this study is to reveal the fairness of the student party's investment in various cities and Taoism, and put forward the corresponding improvement plan. In education finance, one of the parts that many scholars pay attention to and constantly debate is how much finance needs to be invested in order to achieve successful education results. **Methods/Statistical analysis:** The equity level of education expenditure is an important factor for successful educational achievement. It is very meaningful to analyze the fairness of students' personal education finance. **Findings:** After diagnosing the fairness of the current inter regional student investment, give a reasonable improvement plan for educational finance in relatively low areas, and put forward the distribution and development direction of student educational finance in the future First, from 2013 to 2014, the per capita investment of students between regions of the Municipal Department of education was a little unequal, which needs to be improved. Second, we should improve the unfairness of the per capita investment in facility fees of students in various regions. **Improvements/Applications:** It is necessary to evenly distribute the per capita investment and labor cost investment of students to the municipal and municipal education departments. Fourth, it is necessary to analyze the investment amount of each student for follow-up research.

## **Index Terms**

Equity of Students' Investment, Korea Local Education Finance, Education Finance, Korea Education

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## **I. INTRODUCTION**

As the most important value in the field of education finance, fairness has been discussed in various ways. For example, the research on school financial distribution mainly studies the fairness of financial resources allocated to school finance.

According to the research results of Cui Zhiyuan (2014),[1] the level fairness analysis results of unit school finance show that the fairness level of tax and tax is generally high, but in the tax items, the transfer income of local autonomous groups, private transfer income Last year, the fairness level of February gold was very low, and the fairness level of educational activity support fee and school general operation fee in tax items was low. In order to eliminate the gap of per capita education expenses among students in regional and unit schools, and realize the equality of educational opportunities and the fairness of educational financial distribution, it can be seen that the efforts of various subjects of unit schools such as administrative departments, cities, counties, autonomous regions and parents are positive.

According to the research results of song Jixi (2016), the difference in student size is that the smaller the number of classes in primary school, junior middle school and ordinary high school, the higher the number of classes, and the lower the number of classes. According to the survey, "per capita direct education fee for students" is related to the appropriate number of classes and students at all school levels. In addition, there is no relationship between the change trend of "students' per capita school accounting funds" and "students' per capita direct education expenses". However, with the improvement of the level of higher schools, "school accounting allocation" may have an impact on "direct education expenses".

Hong Shengyu Wai (2010) analyzed the determinants of educational fiscal expenditure in various states in the United States, including per capita income, taxes, expenditure restriction policies, unemployment rate, poverty rate, proportion and population density of students, the elderly and blacks, the requirement of more than half of the members of the state legislature, the proportion of members of the Democratic Party in the state legislature It is applicable to the per capita education expenditure of students and residents, and the per capita education expenditure of students and residents every year.

Quan zhaojuan (2014) analyzed that the target business expenses had a negative impact on the fairness analysis of the whole school and the city, medium-sized and large-scale schools, but had no

impact on the schools in the military area, and had a positive impact on the small-scale schools[4]. Although it is difficult to determine, from the overall results of this study, the purpose business expenses have a negative impact on the fairness of school financial distribution.

Li Haojun (2011) took 357 primary schools and 149 middle schools as objects, analyzed horizontal equity and vertical equity by using inequality indexes such as Gini coefficient, McClellan index and Petersen index, and analyzed financial neutrality by using correlation coefficient. For education expenses, special accounting, purpose business expenses, taxes, taxes, etc., unfair financial resources operation has been formed between schools.

The discussion on the fairness of students' educational finance mainly focuses on the unit school, and the discussion on students' educational finance is very insufficient. In addition, the analysis objects are mainly cities, counties and districts, and there are few studies comparing the education finance between cities and roads. Therefore, it is necessary to compare and analyze the equity level of education finance in the whole region. From the perspective of previous research, the analysis content analyzes the per capita education expenses of students or the per capita education expenses of students, but the research on the per capita investment of all students is not perfect. Therefore, it is necessary to analyze not only the per capita direct education cost of students, but also the per capita labor cost and per capita facility cost of students.

## **II. RESEARCH QUESTIONS**

First, what is the fairness level of the per capita investment of students in different regions?

Second, according to different regions, what is the fairness level of students' per capita labor cost and facility cost investment?

## **III. LITERATURE REVIEW**

### ***Education expenses and investment per student***

Since 2010, the Ministry of education has implemented the "edufine school accounting system" for all schools and issued a comprehensive report on local education financial analysis every year. According to the data analysis, the annual expenditure settlement amount of labor cost support, school operation cost, purpose business cost, school environment improvement business cost, BTL operation cost, school special education support cost

and public customized welfare provided by public schools is divided into the number of students, and the price is "public school accounting transfer out fund per student". In addition, the price of dividing the special accounting settlement amount of education expenses into the number of students is set as the analysis index of "per capita education expenses of students" at each school level, which is analyzed together with table 2, Its standards vary from year to year. The 2015 local education financial analysis report, which analyzes the settlement in 2014, does not analyze the "per capita education fee of students".

**Table 1. Changes in the composition of core education services and other services**

Classification	OECD average		Korea	
	Core services	Other services	Core services	Other services
Per capita education expenses	8,001	524	6490	906
Composition Fee	93.7	6.9	87.3	12.2
	94.4	6.3	92.2	7.8

#### IV. METHODS

The purpose of this study is to analyze the equity of investment in different regions, taking the per capita investment, the investment in labor cost and the per capita facility cost of students as the objects. In order to achieve this research goal, the annual trend of the per capita investment of "Local Education Finance" students in local education finance will be used to analyze.

There are many methods to measure the financial fairness of education. This study mainly measures the level fairness. The level equity is measured by the single variable such as the per capita investment of students. In distribution, all students are allocated equal education expenses, which ensures the complete fairness. The statistical method to measure the level fairness is to use the range, average value and Guinness coefficient to analyze the fairness level of the per capita investment of students according to the region. Gini coefficient mainly uses the cardinal number evaluation method to express the degree of imbalance with specific values [4]. Gini coefficient refers to the proportion of the area of Lorentz curve under the diagonal in the total area of the diagonal triangle. The closer the Gini coefficient is to 0, there is no absolute criterion except for equality. Judging

from the Gini coefficient checked in the first study, it is the same as Table 2.

**Table 2. Guinness Coefficient Fairness Score Evaluation Standard**

Classification	Fair	Intermediate State	Not Fair
	<0.4	0.4~0.5	0.5
Odden& Picus[5]	<0.1	<0.1	0.2
Jin Nanshan[11]	<0.3	-	0.3
Yin Hongzhu[6]	0.0~0.2	0.2~0.4	0.4
Wu fanhao[12]	<0.2	0.2~0.4	0.4
This study	0.0~0.2	0.2~0.4	0.4

The method to measure financial neutrality is to analyze the relationship between community financial conditions and student education, using correlation coefficient and elasticity value.

##### (1) Correlation coefficient

Correlation coefficient is a numerical expression of the relationship between two variables. When one variable increases and other variables increase, it is statically correlated. When one variable increases and other variables decrease, it is called uncorrelation. It is generally believed that the correlation coefficient above 0.7 is high correlation, 0.4 ~ 0.7 is general correlation, and below 0.4 is low correlation. From the perspective of neutrality of education finance, when the correlation is low or 0, education finance can be said to be neutral[7].

##### (2) Elasticity (elasticity)

Elasticity is to calculate the change rate of different variables in proportion according to the change rate of a variable[8]. It is to master the formula applicable to calculating the price elasticity of demand in economics and the method applicable to mastering the neutrality of educational finance[9].

#### V. RESULTS

This chapter will compare and analyze the equity of This study analyzes the fairness of students' per capita investment scale. According to the research questions of this study and the research results, the conclusions are as follows.

First, on the whole, the per capita investment of

students in the city, road and luting areas is relatively fair. The per capita investment of students between regions of the Municipal Department of education was unequal between 2012 and 2014. The per capita investment of students maintains the level fairness among the regions of Taoist education departments. Specifically, the Gini coefficient of the per capita investment of students of the municipal education departments was 0.0016 in 2011, 0.0038 in 2012, 0.2178 in 2013 and 0.2958 in 2014, showing a gradual increasing trend from 2012 to 2014. The Gini coefficient of the per capita investment of students of the Taoist Education Department decreased from 0.0196 in 2011 to 0.0156 in 2014. Second, according to different regions, the fairness of students' per capita labor cost and facility cost investment is different. Specifically, it can be seen that the per capita labor cost investment of students is fair among cities, roads and land halls. From the Gini coefficient of the Municipal Department of education, it shows a gradual upward trend from 2011 to 2014, but the per capita labor cost investment of students of the Municipal Department of education is relatively fair. From the Gini coefficient between regions of the Taoist Education Department, it showed a gradual downward trend from 2011 to 2014, but the per capita labor cost investment of students gradually became fair.. In 2014, the city with the largest labor cost investment per student was Sejong city of 7.444 million won, and the city with the lowest labor cost investment was Seoul city of 4.193 million won. Busan and Shizong are the areas that exceed the average level.

**Table 3. Annual progress of per capita facility fee investment of students in each region Unit: 10000 won[10]**

City	2011	2012	2013	2014
Gyeonggi do	35.9	51.3	46.7	44.3
Jiangyuan Road	143.2	144.2	134.4	139
Zhongqing North Road	94.4	90.9	111.9	107
Zhongqing South Road	84.5	98.5	72.8	55
Quanluo North Road	85.8	87.6	79.9	61.1
Quanluonn Road	125.5	157.2	167.5	210.9
Qingshang North	93.2	78.6	91.9	90.7

Road				
Qingshang South Road	48.4	54.9	56.5	68.9
Chejudo	122.7	99.7	92.5	75.5
Maximum	143.2	157.2	167.5	210.9
Minimum	35.9	51.3	46.7	44.3
N / A. range	107.3	105.9	120.8	166.6
Average	92.62	95.87	94.9	94.71
Gini Coefficient	0.0271	0	0.0012	0.01

First, from 2013 to 2014, the per capita investment of students between regions of the Municipal Department of education was a little unequal, which needs to be improved. Specifically, the amount of support invested in Shizong city is very large, which can be said to be unfair compared with other regions. The amount of investment support in Shizong city was 24.917 million won in 2013 and 3.766 million won in 2014, a difference of about three times compared with other cities. In the future, the government should pay attention to the education situation of Shizong city as a special autonomous city. At the same time, it should also comprehensively consider the education situation of other cities and make balanced education investment.

Second, we should improve the unfairness of the per capita investment in facility fees of students in various regions. Although the per capita labor cost investment of students is considered fair among cities, roads and land departments, the investment amount of facility fees is unfair. Specifically, from 2013 to 2014, the per capita facility fee of students of the Municipal Department of education showed great unfairness. The reason for non-compliance with the fairness of facility fee level is that the proportion of facility fee investment of Shizong student party is too high, so it is likely to happen. The investment amount of facility fees in Shizong city is about 20 times higher than that in other cities in 2013 and about 30 times in 2014. In the future, we should consider the fairness of investment distribution between Shizong city and other cities.

Third, it is necessary to evenly distribute the per capita investment and labor cost investment of students to the municipal and municipal education departments. From 2011 to 2013, Busan was the city with the largest per capita investment of students in all regions of the municipal and municipal education departments, and Seoul special city was the city with the least support. In the future, Seoul special city should strive to get the construction fee of the

student party for the development of student education. From 2011 to 2014, the largest amount of per capita investment in students, student party labor costs and student party facilities in all regions was quanluonan Road, and Gyeonggi road received the least support. In 2014, the number of students in Gyeonggi province was 1491940, which was less than that in other regions. In the future, Gyeonggi province needs to pay more attention to characteristic education such as innovative school education and further recruit students. In 2014, although the number of students in quanluonan road was less than that in Qingbei and Qingnan, it received the most investment. In the future, we should also allocate a balanced amount of student party labor investment to all Taoist education departments.

Fourth, it is necessary to analyze the investment amount of each student for follow-up research. At present, there are many studies on the distribution of education expenses, but there are few studies on students. This study analyzes the equity of investment per student from 2011 to 2014. In the future, it is necessary to pay more attention to the investment amount of each student, investigate the actual education situation of students in various cities and roads, and use other research methods to obtain more accurate results.

## VI. CONCLUSION

First according to different regions, the fairness of students' per capita labor cost and facility cost investment is different. Specifically, it can be seen that the per capita labor cost investment of students is fair among cities, roads and land halls. From the Gini coefficient of the Municipal Department of education, it shows a gradual upward trend from 2011 to 2014, but the per capita labor cost investment of students of the Municipal Department of education is relatively fair. From the Gini coefficient between regions of the Taoist Education Department, it showed a gradual downward trend from 2011 to 2014, but the per capita labor cost investment of students gradually became fair.

From 2011 to 2012, the Gini coefficient of per capita facility fee investment of students was 0.0306-0.0395, which was relatively fair among regions of the Municipal Department of education. From 2013 to 2014, the Gini coefficient was 0.6374-0.7421, which was very unfair. From 2011 to 2014, the Gini coefficient of the per capita facility fee investment of students is 0-0.0271, which means that the horizontal fairness between the regions of each department of education has been well observed.

Second, according to the different regions of the municipal and provincial education departments,

there are differences in the per capita investment of students, the per capita investment of labor costs and the per capita investment of facilities costs. From 2011 to 2013, the city with the largest per capita investment of students in all regions was Busan, and the city with the most support was Seoul special city. From 2011 to 2014, there was one student in each region.

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