

A Descriptive Analysis of the “Public and Private Enrollment Policy” and its Effectiveness Taking Hangzhou Kindergarten Parents as an Example

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Abstract: At present, people’s demand for quality education is increasing day by day. “Private schools are ‘at the top’ and public schools are ‘at the bottom’” has become a normal state, which makes the quality of students in public schools can’t be guaranteed, and all kinds of schools can’t conduct healthy competition^[1]. Therefore, Hangzhou municipal government issued the Notice on Simultaneous Enrollment of Public and private Primary Schools to relieve the enrollment pressure of public schools.

Keywords: Public and Private Enrollment Policy; Descriptive Analysis; Multivariate Logistic Regression Model.

1. Introduction

Today, under the mechanism that private schools can recruit students in advance, the chaos of “private fever” and “training fever” keeps emerging in the society^[2], which makes it impossible for all kinds of schools to conduct healthy competition, contrary to the concept of educational fairness. Therefore, Hangzhou municipal government issued the notice on simultaneous enrollment of public and private primary schools to relieve the enrollment pressure of public schools.

In this paper, by referring to relevant literature, the relevant indicators that may affect the implementation of the policy are summarized, and a questionnaire survey is conducted in Hangzhou urban communities and youth activity centers, statistical models are established, and quantitative analysis is made on the influencing factors of the policy.

2. Subject of the Research

The research object of this paper is the parents of prospective first-grade students and parents of senior and middle-class students in Hangzhou. We distributed and collected 572 valid questionnaires in Hangzhou urban communities and youth activity centers.

3. A descriptive analysis of the effectiveness of “Public and Private Enrollment Policy”

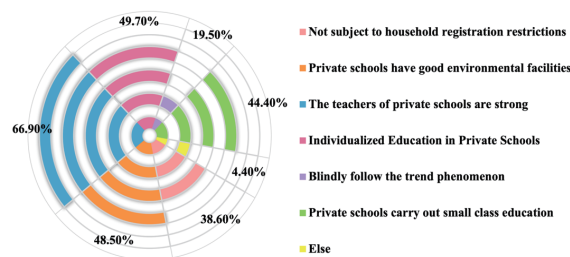


Figure 3-1 Possible causes of “private fever”

Among the 572 valid questionnaires we collected, more than half and nearly half of the parents believe that the strong teachers and personalized education in private schools are the causes of the "private fever". Only 19.5% of parents believe that parents blindly follow the trend. This shows that the main reason for the "private fever" should be attributed to the gap between citizen primary schools and private primary schools.

4. Analysis of policy effectiveness under multivariate Logistic regression model

To investigate the effectiveness of the Public and Private Enrollment Policy and its influencing factors, we used a multiple Logistic regression model to fit the survey data.

Combined with the survey questionnaire, we selected the overall effectiveness of the Public and Private Enrollment Policy as the dependent variable, gender (X_{1i}), age (X_{2i}), education level (X_{3i}), location (X_{4i}), annual household income level (X_{5i}),

child's grade of study (X_{6i}), child's household registration status (X_{7i}), knowledge of the policy (X_{8i}), and school choice mentality (X_{9i}) as the initial independent variables, and variable selection was conducted through the full-value set regression method^[3], and the influencing factors of policy effectiveness were finally determined according to the AIC criterion, so as to establish a multivariate Logistic regression model^[4]. The specific results are as follows.

Table 4-1 Likelihood ratio test table

| Effect | Model Fitting Conditions | Likelihood ratio test | | |
|----------------------|---|-----------------------|-------------------|--------------|
| | The -2 log likelihood of the simplified model | chi-square | degree of freedom | significance |
| intercept | 132.441 | 19.804 | 3 | .000 |
| education attainment | 129.233 | 16.596 | 3 | .001 |
| Policy understanding | 120.911 | 8.274 | 3 | .041 |

The p-values for the two criteria of Pearson's correlation coefficient and Deviation were 0.566 and 0.572 respectively (both greater than 0.05) by the goodness of fit test, indicating that the model fitted well. The likelihood ratio test showed that the p-values for each influencing factor were less than 0.05, indicating that the 2 independent variables were both statistically significant. Now assume that

$$A = e^{-0.444+0.035x_3+0.994x_8}$$

$$B = e^{-0.032+0.502x_3+1.10x_8}$$

$$C = e^{-2.904+1.078x_3+1.291x_8}$$

Then a multiple logistic regression model can be obtained:

$$p(y = 1) = \frac{A}{1 + A + B + C}$$

$$p(y = 2) = \frac{B}{1 + A + B + C}$$

$$p(y = 3) = \frac{C}{1 + A + B + C}$$

$$p(y = 4) = \frac{1}{1 + A + B + C}$$

Based on the above regression model, we can specifically analyze the parents' views on the effectiveness of the policy in specific kindergartens. Taking educational background as an example, the detailed results are as follows:

Table 4-2 The solution result of the change of educational background

| | | | | | |
|---------------------------------------|--------------------------|----------------|----------------|-------------------|------------------------|
| Junior high school and below | Policy effectiveness | Very effective | More effective | No obvious effect | Have a negative impact |
| | The forecast probability | 21.65% | 64.38% | 9.51% | 4.46% |
| High school or vocational high school | Policy effectiveness | Very effective | More effective | No obvious effect | Have a negative impact |
| | The forecast probability | 13.91% | 13.91% | 13.91% | 13.91% |
| Undergraduate or junior college | Policy effectiveness | Very effective | More effective | No obvious effect | Have a negative impact |
| | The forecast probability | 8.13% | 61.56% | 28.75% | 1.56% |
| Junior high school and below | Policy effectiveness | Very effective | More effective | No obvious effect | Have a negative impact |
| | The forecast probability | 4.29% | 51.84% | 43.07% | 0.80% |

Similarly, the probabilistic result of policy knowledge can be obtained. Through a comparative analysis of the above four results, we find that with the increase of educational background, parents' sense of identity to the policy continues to decline. This may be because with the increase of educational background, kindergarten parents have more access to and understanding of policy information, stronger self-judgment ability, and will have unique views and in-depth excavation of policies.

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