

Evidence-Based Study on the Effectiveness of Educational Policy(IV): Analysis on the Rate of Return to Education by the School Level

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The purpose of this study was to analyze the educational structure and scale of schools by type including high school and higher education institutions, colleges, and universities, with the goal of obtaining the internal rate of return on social education investment and proposing improvements to present-day educational fiscal policy.

□ Estimation of Public Education Costs by School Type

We derived the public education fees by type of high school through special accounting for public education fees and school accounting settlements. In 2013, the total for public education fees country-wide was 167,841,000,000 Korean won, or approximately 8,600,000 won per student at a regular high school and 11,000,000 won per student at specialized high schools.

According to the calculation results of professional colleges, public education fees totaled 4,148,000,000 Korean won, or approximately 8,040,000 won per student. For regular colleges, public education fees totaled 21,341,500,000 Korean won, or 12,480,000 won per student on average. In the case of regular graduate schools, the

total was 3,217,600,000,000 won, or 16,084,000 Korean won on average per student.

□ Estimation of Private Education Costs by School Type

The amount spent in Korea on private education for high schools is estimated to be 9,735,800,000,000 Korean won, an average per student of 5,600,000 won. In the case of special high schools, the total is 2,750,000 won. In the case of professional colleges, the results found that the estimated amount of money spent on private education was 1,450,000,000,000 Korean won, or approximately 2,760,000 Korean won per student. In the case of regular colleges, the results showed that the total amount spent on private education was approximately 5,329,900,000,000 Korean won, or roughly 3,560,000 Korean won per student. The results of our study showed that for regular graduate schools, the total amount spent on private education was 3,655,000,000,000, a per-student average of 4,980,000 Korean won.

□ Estimation of Indirect Educational Costs

On average, the cost of social indirect educational costs per high school student in Korea is approximately 5,130,000 Korean won, or a total of 9,633,800,000,000 Korean won nationwide. The estimated indirect educational costs for professional colleges is 12,690,000 Korean won on average per student, with the total being 6,932,000,000,000 Korean won. In the case of regular colleges, the annual average per student is 13,140,000 won, making the total approximately 19,661,700,000,000 Korean won. As for regular graduate schools, the results showed an average of 16,660,000 won per student and a total of 2,734,000,000,000 Korean won.

□ Total Educational Costs by School Type

Direct education costs are calculated by combining total public education costs, private education costs and indirect education costs. In the case of high schools, the total education costs are estimated to be 35,768,700,000,000 Korean won, or an average of 19,000,000 won per student. For professional colleges, total education costs are approximately 11,530,600,000,000 won, or an average of 2,410,000 Korean won per

student. As for regular colleges, the total is 46,619,400,000,000 won, which works out to an average of 29,090,000 won per student.

□ Rate of Return by School Type

For all high schools, the social rate of return was 6.64%, while the personal rate of return was 9.43%. For regular high schools, the social rate of return was 5.26%, and the personal rate of return was 7.31%. In the case of special high schools, the respective social and personal rates of return were 6.51% and 12.35%. For all high schools, the social rate of return was 6.64%, while the personal rate of return was 9.43%.

For professional colleges, it was found that the social rate of return was 7.07%, and the personal rate of return was 7.45%, while for engineering majors, the respective totals for social and personal rate of return were found to be highest, at 11.21% and 11.65%. The lowest totals were found for art, music and physical education majors.

For regular universities, the social rate or return was found to be 7.12%, while the personal rate of return was 7.31%. The social rate of return for engineering majors was highest at 8.93%, while for medicine majors, it was 7.70%. For liberal arts majors, the total was 6.65%, while majors in the natural sciences had a result of 5.94%. Students majoring in art, music and physical education had a result of 3.64%. The personal rates of return for the above majors were 9.92% for engineering majors, the highest, followed by 8.30% for medicine majors, 7.60% for liberal arts majors, 6.41% for natural science majors, and 3.82% for students majoring in art, music and physical education.

For graduate schools, the social rate or return was found to be 6.92%, while the personal rate of return was 7.55%. The highest social rate of return was for medicine majors 13.52%, while for engineering majors, it was 13.0%. For natural science majors, the total was 8.34%, liberal arts majors had a result of 3.56%, and students majoring in art, music and physical education had a result of 3.18%. The personal rates of return for the above majors was highest for engineering majors at 14.66%, followed by 13.57% for medicine majors, 9.34% for natural science majors, 4.12% for liberal arts majors and

3.18% for students majoring in art, music and physical education.

□ Policy Implications and Suggestions

On the basis of the results of an analysis of the structure of educational costs by school type and the calculation of educational rate of return, the following policy suggestions may be made. On the basis of the results of an analysis of the structure of educational costs: 1) a way must be found to ease the burdensome gap between public and private college education; 2) as tuition represents the biggest personal burden for educational costs, both public and private sector investment in higher education must be increased; and, 3) in order to increase financial aid, limitations on tuition increases and deregulation to enable universities to pursue profitable business which will result in greater autonomy for universities is needed.

Key Terms: Educational Cost, Educational Benefit, Profitability of Educational Investment, Internal Rate of Return, Human Capital Earning Functions Approach