

# A Study on the Restructuring and Efficiency of Higher Education Institutions: a DEA approach.

- **Author(s):** GwangHo Han ,HyunWook RYU
- **Abstract:** In this paper, we investigate the effect of the higher education evaluation policy in Korea. For the test, we employ the DEA (Data envelopment analysis) method and Fama-Macbeth regression. Following the literature, we calculate DEA scores using the input groups, such as facility, the number of faculty, and research fundings, and the output groups, such as research findings and enrolment ratio. Our findings shed new light on effective university policy for Korea in the rapidly changing university social environment. Our result, the T-test using efficiency score calculated from the DEA method, shows that most higher education institutions in Korea have improved up to the year 2015 when the government carried out the first cycle of assessment. This result implies that the policy from 2010 to 2015 is effective. Hence, private institutions have incentives to relay more input variables to the output. Considering the ratio of total scores and the difference in scores among the institutions, grade C-group (the subgroup) shows statistically significant inefficiency improvement between the years 2010 and 2015. Specifically, the improved effect can be interpreted as strong in subgroups. To discuss the endogeneity, a regression method has applied for examining grade-group and efficiency growth. Our findings support the T-test results that efficiency growth in subgroups is higher rather than in the upper group. We also illustrate that younger university more innovative rather than older universities.
- **Keywords:** DEA, Fama-Macbeth regression, Higher education, Efficiency