

**Higher Education in Developing Countries:  
Should a Country Provide Both Open and Elite Public Universities?**

It is commonly believed that students can earn higher academic achievement if they attend the same school with high ability student peers. Students will learn more and better when they are with high ability friends than when they are with the lower ones. Competition in school increases when high ability students are present in the class. High ability peers increase the quality of class discussions, help lower ability students outside classes, and are role models for other students. High ability students also increase the teacher's ability because they will motivate teachers and professors to work hard to prepare for classes and keep up with new ideas.

With the existence of a peer group externality, the allocation of the student body into different school becomes an important policy decision. Different groupings will produce different outcomes on the achievement of students and total utility of the student body. The distribution of educational achievement depends on the allocation of students with different ability into different groups. In my project, I discuss a choice of grouping the best students together in an elite, publicly provided, educational institution while the rest of the student body is distributed, by market system, between an open public university and a private university.

**Result:**

Assume the utility function depends on income and educational achievement, which is determined by the student ability and the average ability of student body in the university he or she attends, my research question is whether the three-type university system is better for a government that aims to maximize social return than the two-university type system with open public university and private university. I discover that the three-type university system that groups the top ability students together produces lower social utility than the two-type university system. The reduction in the average ability of students in open public and private universities causes the decrease in the total utility of the students in these universities, and the decrease cannot be offset by the utility gained by high ability students in the elite university.

	<b>Open Public University</b>	<b>Private University</b>	<b>Elite Public University</b>
<b>Two-University Type System</b>			
--The boundary line: $y^* = 8.67824 - 2.52638b$			
Number of students (in percentage)	31.79	68.21	-
Average ability (out of 8)	1.794	2.71	-
Cost	0.1453	0.3493	
-- Total cost = 0.4946 --			
Average utility	9.62515	20.5151	-
Total utility	3.05978	13.9927	-
-- Social welfare = 17.05248 --			
<b>Three-University Type system</b>			
<u>Case 1- 5% in elite public (b* = 3.4233605)</u>			
--The boundary line: $y^* = 9.05719 - 2.74044(b)$			
Number of students (in percentage)	30.2434	64.7530	5.00
Average ability (out of 8)	1.76828	2.62737	3.67825
Cost	0.137608	0.137608	0.0224
-- Total cost = 0.488107 --			
Average utility	9.39402	19.4389	21.8541
Total utility	2.8410	12.5872	1.09271
-- Social welfare = 16.5209 --			
<u>Case 2-10% in elite public (b* = 3.201745)</u>			
--The boundary line is $y^* = 9.27615 - 2.89687(b)$			
Number of students (in percentage)	0.127624	0.310164	0.04360
Average ability (out of 8)			
Cost	9.09304	18.5175	20.3902
-- Total cost = 0.481388 --	2.5661	11.4394	2.03903
Average utility			
Total utility			
-- Social welfare = 16.0445 --			

With the specific situation in my project, the policy recommendation for the government is to let the market system allocates students into open public and private universities while the government sponsors the open public one. The government intervention in the allocation will reduce the social welfare and do more harm than good to the society.