

**Is Privatization Necessary
to achieve
Quality of Universities?**

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Quality and Ownership

- In the past, public universities were flourishing
- The best universities were known to be the German ones like Heidelberg and Berlin
- Today the best universities are private. (But private are not always the best).
- The US private universities are the highest in the ranking of universities

Ownership of US top 10 universities

Institution	Regional ranking	Private/Public
Harvard	1	Private
Stanford	2	Private
Berkeley	3	Public
MIT	4	Private
Caltech	5	Private
Columbia	6	Private
Princeton	7	Private
Chicago	8	Private
Yale	9	Private
Cornell	10	Private

- Is there some correlation between Quality and Private ownership?

- Previous Research on this correlation:

- Psacharopoulos, 2003 claimed that there is a relationship between the distinction of private vs. public universities and the quality of university.

- He showed that countries with a high proportion of private institutions have overall higher quality universities.

country	% Private share of education	Nb. Universities in top 100
Austria	5	1
Denmark	2	1
France	14	4
Germany	8	7
Sweden	12	4
UK	30	11
Japan	57	5
Australia	48	2
US	67	51
Canada	41	4
Israel	43	1

- This paper analyses whether private ownership is a necessary condition for a university's achieving quality as suggested by these two tables.

I. What is Quality?

II. What elements affect Quality?

1. Private Ownership
2. Flexibility
3. Budget

III. Empirical Analysis on relationship between quality and Ownership, flexibility, and budgets.

I. Quality

- Universities produce multiple goods and have three main goals.
- **The first goal is R&D.**
 - The university is the place where ideas are developed, innovation processes are invented, and basic research takes place.
- **The second: educate** the next generation of the labor force.
 - Higher education leads to an **increase in human capital**, which is one of the main factors of production today
- **The third role** is to increase **social capital**.

- Therefore, the quality of a given university should be related to the excellence of these two elements: R&D and education.
- The ideal index for quality of education is related to the increase in human capital, which can be proxied by an increase in wages.
- So, assuming the same ability, better education will be represented by higher wages.
- For R&D, the best proxy is to check its impact on other research.

- For the past few years, two institutions have published quality indices of universities, attempting to find good proxies for these two elements: education and R&D.
- In 2004, The Times Higher Education supplements (THES) started producing a ranking of the top 500 universities,
- Shanghai Jiao Tong University (SJTU), less known at the beginning, has become well known, since it seems to proxy these two elements of quality in a superior way.
- In this paper, we use the SJTU ranking.

Correlation between different proxies of quality

	THES Overall (2006)	THES Citation (2006)	SJTU Overall (2006)	SJTU Citation (2006)
THES Overall (2006)	1.00			
THES Citation (2006)	.59	1.00		
SJTU Overall (2006)	.78		1.00	
SJTU Citation (2006)		.47	.80	1.00

Source: SJTU and THES 2006

II. Ownership

- When defining the structure of ownership of universities, it should be emphasized that there are not two, but three different types of institutions:
- Public, Private non-profit (PNP), and private for-profit (PFP).
- The first group includes all institutions for whose budgets the state is responsible. In most countries, the majority of institutions fall into this category.
- Of these 500 top universities from among 40 countries, only 12% are private.

Leading US universities

World Rank	Institution	Classification	Year of establishment
1	Harvard Univ	PNP	1636
2	Stanford Univ	PNP	1891
3	Univ California - Berkeley	Pub	1868
5	Massachusetts Inst Tech (MIT)	PNP	1861
6	California Inst Tech	PNP	1891
7	Columbia Univ	PNP	1754
8	Princeton Univ	PNP	1746
9	Univ Chicago	PNP	1890
11	Yale Univ	PNP	1701
12	Cornell Univ	PNP	1865
13	Univ California - Los Angeles	Pub	1919
14	Univ California - San Diego	Pub	1960

United States

41	Vanderbilt Univ	PNP	1873
43	Pennsylvania State Univ - Univ Park	Pub	1855
44	Univ California - Davis	Pub	1905
45	Univ California - Irvine	Pub	1965
47	Rutgers State Univ - New Brunswick	Pub	1766
49	Univ Pittsburgh - Pittsburgh	Pub	1787
50	Univ Southern California	PNP	1880
51	Univ Florida	Pub	1853
58	Univ North Carolina - Chapel Hill	Pub	1879
60	Carnegie Mellon Univ	PNP	1900
61	Ohio State Univ - Columbus	Pub	1870
68	Purdue Univ - West Lafayette	Pub	1869
70	Brown Univ	PNP	1764
74	Univ Arizona	Pub	1885

United States

107	Univ California - Riverside	Pub	1954
108	Tufts Univ	PNP	1852
110	Univ Virginia	Pub	1819
116	Emory Univ	PNP	1836
125	Baylor Coll Med	PNP	1900
126	Mayo Clinic Coll Med	PNP	1972
131	Univ Hawaii - Manoa	Pub	1907
135	Dartmouth Coll	PNP	1769
138	Univ California - Santa Cruz	Pub	1965
139	Univ Georgia	Pub	1785
140	Univ Illinois - Chicago	Pub	1890
141	North Carolina State Univ - Raleigh	Pub	1887
147	Univ Massachusetts Med Sch	Pub	1962

United States

463	Boston Coll	PNP	1827
464	Univ Maine - Orono	Pub	1862
472	Univ Idaho	Pub	1889
474	Univ Kansas Med Center	Pub	1905
476	Med Coll Georgia	Pub	1828
478	Lehigh Univ	PNP	1865
480	West Virginia Univ	Pub	1867
481	Univ Louisville	Pub	1798
485	Univ Wisconsin - Milwaukee	Pub	1956
487	Coll William & Mary	Pub	1693
491	New Mexico State Univ - Las Cruces	Pub	1888
497	Howard Univ	PNP	1867
504	Old Dominion Univ	Pub	1930
507	Montana State Univ - Bozeman	Pub	1893₁₆

Leading UK universities

World Rank	Institution	Classification	Year of establishment
4	Univ Cambridge	Pub	1209
10	Univ Oxford	Pub	1096
23	Imperial Coll London	Pub	1907
25	Univ Coll London	Pub	1826
48	Univ Manchester	Pub	1824
53	Univ Edinburgh	Pub	1582
62	Univ Bristol	Pub	1876
72	Univ Sheffield	Pub	1897
81	Univ Nottingham	Pub	1798
84	King's Coll London	Pub	1829
92	Univ Birmingham	Pub	1900
111	Univ Liverpool	Pub	1881

Leading Japanese universities

World Rank	Institution	Classification	Year of establishment
20	Tokyo Univ	Pub	1877
22	Kyoto Univ	Pub	1897
67	Osaka Univ	Pub	1869
77	Tohoku Univ	Pub	1907
94	Nagoya Univ	Pub	1871
99	Tokyo Inst Tech	Pub	1881
149	Hokkaido Univ	Pub	1876
150	Tsukuba Univ	Pub	1872
154	Kyushu Univ	Pub	1903
267	Kobe Univ	Pub	1902
285	Keio Univ	PNP	1858
293	Hiroshima Univ	Pub	1929

Leading French universities

World Rank	Institution	Ownership	Year of establishment
40	Univ Paris 06	Pub	1971/1253
52	Univ Paris 11	Pub	1970
85	Ecole Normale Super Paris	Pub	1985/1794
101	Univ Strasbourg 1	Pub	1567
132	Univ Paris 07	Pub	1971/1253
183	Univ Grenoble 1	Pub	1811
184	Univ Paris 05	Pub	1971/1253
219	Univ Montpellier 2	Pub	1970
251	Ecole Polytechnique	Pub	1794
264	Univ Lyon 1	Pub	1971
271	Univ Mediterranee	Pub	1969/1409

Leading Israeli universities

World Rank	Institution	Ownership	Year of establishment
64	Hebrew Univ Jerusalem	Pub	1918
106	Technion Israel Inst Tech	Pub	1924
117	Tel Aviv Univ	Pub	1956
145	Weizmann Inst Sci	Pub	1949
295	Ben Gurion Univ	Pub	1969
328	Bar Ilan Univ	Pub	1955
492	Univ Haifa	Pub	1963

- There are countries in which PNPs were almost nonexistent until recently (Germany, for instance), and other countries wherein they have always existed (the US and Japan).
- The US and Japan has taken a quite different path. In these two countries, PNP institutions were already quite developed by the late 19th century.
- Moreover, in both countries, the development of PNP and public institutions occurred in parallel.
- In the US, in 1890, public institutions constituted only 22% of total enrollment. But increased during the 20th century to reach 50% in 1935, 60% in 1940, and 70% today.

- In Japan, private institution enrollment accounts for nearly 80% of all university enrollment. However, with a few exceptions, the public universities are those ranked high.
- In Europe, the PNP sector is not developed at all, and only recently have some been established.
- The case of Germany is typical, wherein from 1980, 60 PNPs have been created.
- In the UK, only two universities are privately financed.

- In the developing world, budget is diverted mainly to primary education, so that higher education is left mainly to financing by the private sector.
- The increase in enrollment in Latin America has been big: The rate of growth between 1960 to 1970 was 260%. In consequence, it has been compensated for by an increase in enrollment in private universities.
- In 1950, 7% of the enrollment was in private universities; in 1990 it was 40%.

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- The third type of institution is the private for-profit (PFP) universities, all of which are quite new. While they are not numerous, it could well be that they²³ will take off in the future.

U.S higher education in numbers

U.S. Four year Institutions and Enrollment: Fall 2001				
	Public	Private Not-For- Profit	Private For-Profit	Total
Institutions				
Four-Year	25%	62%	13%	2,520
Enrollment				
Four-Year	65%	32%	3%	9,678,426

Source: American Council on education, page 2.

III. Does Private Ownership affect Quality?

Empirical Results

- Correlation between number of universities in the list of top 100 in a specific country
 - With percent of private institution = 54% (Psach.)
 - With GDP per capita = 34%
 - With number of students = 65%
- The correct method to check this relationship is at the level, not of countries, but universities.
- I check on the 500 top universities, the effects of ownership, flexibility and budget on quality of universities

- 1. Quality and Ownership

- Does private ownership affect quality?
- ownership: A dummy for the universities that are private
- also check seniority

Ownership and Seniority on Quality of institutions

<i>Quality of institutions</i>	(1)	(2)	(3)	(4)	(5)
Constant	247.73 (2.82)	282.38 (19.92)	236.14 (7.83)	243.16 (35.89)	266.92 (19.02)
Private ownership	55.35 (35.77)	61.28 (2.35)	49.81 (1.86)	18.19 (0.88)	26.43 (0.95)
Seniority			.37 (1.73)		
R ²	.02	.03	.05	.00	.01
Obs	508 (all)	166 (US)	166 (US)	488 (all - 20)	146 (US - 20)

- In conclusion, it appears that the results at the country level, as presented by Psacharopoulos, are also robust at the individual university level.
- In the next slides, I attempt to isolate which element implied by ownership leads to the relationship between ownership and quality.
- I focus on two main elements: flexibility and budgets.

2. Quality and Flexibility

- One of the main differences between private and public institutions is the level of intervention by the state.
- States/governments do sometimes intervene in the universities administration.
- There are at least four levels on which governments intervene in the public institutions:

- (1) flexibility about recruitment of scholars, and freedom in deciding on their promotions
- (2) freedom of admission of students
- (3) freedom of decisions on salaries
- (4) freedom regarding tuition fees.

- In Table 4, I present an *Index of Flexibility* of public institutions in the various countries of the sample.
- On each of these four levels of government intervention, I have built an index. At each level, the ranking goes from 1 (no flexibility) to 4 (total flexibility).
- Then, I build a one-index for flexibility, which is the product of these 4 indices, and which goes from 1 to 256.
- The intuition underlying this methodology of creating this index, based on product, is that cross-effects among flexibilities are important.

Flexibility on Quality of institutions

<u>Quality of institutions</u>	(1)	(2)
Constant	196.60 (8.50)	254.74 (34.59)
Private ownership	31.94 (1.51)	52.24 (2.62)
Flexibility	4.90 (2.65)	
R ²	.03	.02
Obs	453 (25 countries)	453

- So, it is not ownership that has an influence on the quality of universities, but rather *flexibility of administration*.
- Governments that leave their universities alone to make their own decisions actually give them the possibility of attaining higher quality.
- In the next slides, I analyze the effect of budgets on quality.

3. Quality and Budgets

- The first question: Are budgets and budgets per student affected by ownership and flexibility?

Flexibility and ownership on Budgets

<u>Budget</u>	(1)	(2)	(3)
Constant	2.31 (1.76)	2.31 (1.79)	2.23 (1.98)
Private Ownership	6.55 (4.06)	-2.77 (-0.66)	-1.93 (-0.54)
Private (dummy for US)		10.4 (2.40)	6.33 (1.64)
Flexibility	.03 (5.11)	.03 (5.19)	.03 (5.43)
R ²	.30	.32	.26
Obs	161	161	141 (-20 US)

Flexibility and ownership on Budget per student

<u>Budget</u> <u>Per student</u>	(1)	(2)	(3)
Constant	21802.58 (1.31)	21802.58 (1.34)	20624.82 (1.77)
Private	122558.50 (6.00)	-20919.43 (-0.40)	-19751.69 (-0.53)
Private (dummy for US)		160695.30 (2.94)	123744.10 (3.11)
Flexibility	124.32 (1.44)	124.32 (1.47)	124.36 (2.05)
R ²	.24	.28	.26
Obs	161	161	141 (-20 US)

- In conclusion, flexibility is an important factor in obtaining budgets.
- About ownership, there is a main difference between the US and other countries.

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- Are budgets per se affecting quality, and what exactly are budgets permitting to finance that seems necessary for quality?

Budgets and Flexibility on Quality

<i>Quality of institutions</i>	(1)	(2)	(3)
Constant	252.15 (10.21)	179.22 (6.33)	242.98 (10.99)
Private	31.59 (0.90)	31.40 (0.85)	-10.16 (-0.30)
Flexibility	.58 (3.67)	.36 (2.31)	.13 (0.80)
Budget per student		.005 (3.10)	.006 (0.80)
Students		.006 (4.01)	
Budget			.006 (5.19)
R ²	.19	.32	.37

<i>Quality of institutions</i>	(1)	(2)	(3)
Constant	232.57 (8.61)	198.26 (4.59)	209.07 (6.37)
Private			-2.38 (-0.06)
Flexibility			.25 (1.30)
Budget /student	.002 (2.52)	.003 (0.86)	.001 (1.91)
Academic staff	.03 (2.38)	.01 (1.39)	.02 (2.18)
Non academic staff	.01 (4.10)	.001 (2.15)	.01 (2.71)
Professor salary		.001 (3.27)	
R ²	.36	.44	.37

- ‘Budget’ and not ‘budget per student’ is significant.
- Budgets is the necessary condition for quality,
- Higher flexibility (and not private ownership) leads to higher budgets, which lead to quality

- Higher budgets permit to finance more ‘non-academic’ staff as well as higher salaries -

two necessities elements for quality.

- Indeed, good universities employ much more non-academic staff and pay higher salaries

Conclusion

**•Is Privatization Necessary
to achieve Quality of Universities?**

•No, but flexibility is.

- Unless the unions/governments and public opinion understand that the best policy is to permit at least some flexibility,
- privatization will become the panacea
- While it is not a necessary phenomenon, the lack of serious reforms in countries without flexibility will lead to private universities to take the lead.