

Tertiary education: The United States

Abstract

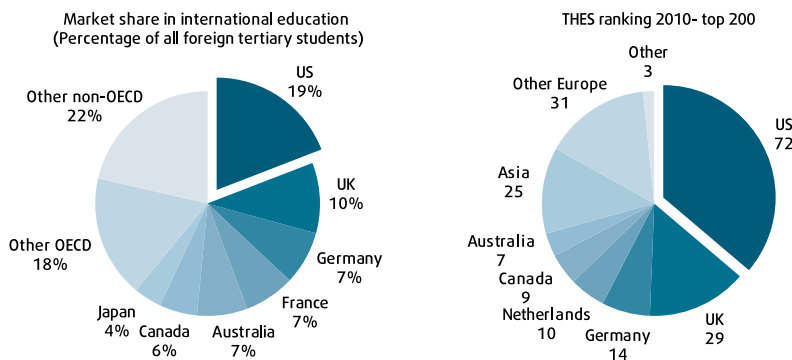
American universities successfully address two important issues: a growing demand for tertiary education, and limited capacity and public funding. A diversity of academic opportunities helps target different educational needs, while abundant funding and favorable governance allow top universities to attract world scholars, students, and companies, channeling knowledge into ideas, innovations, and business solutions. Moreover, universities enjoy autonomy and diversity in funding, which is important in setting standards. U.S. universities dominate the international league tables, taking the top 5 positions - 7 of the top 10 - in the latest Times Higher Education ranking. Moreover, U.S. universities attract 20 percent of all international students. Given the role of top universities in building human capital for public and private sectors and as direct and indirect contributor to innovation, other countries should look at how the United States regulates and finances its higher education system.

As economies become more knowledge-based, universities that act like clusters that create and disseminate knowledge. Simultaneously, more people around the world want to study. According to OECD, enrollment in tertiary education rose on the global level from 68 million in 1991 to 132 million in 2004. Tertiary education is also influenced by globalization and international mobility, which allows students to choose among different locations.

Best of the best

In tertiary education the United States is the world leader. The country accounted for a third of the total OECD population with higher education, while its universities top the world rankings. Out of 200 universities listed in the Times Higher Education World University 2010 ranking (THES), 72 were American (figure 43).¹ Each university from the top five was from the United States. In the Academic Ranking of World Universities, 8 out of the top 10 were American universities.² Ivy League schools like Harvard, Princeton, or Yale are globally recognizable brands that attract researchers and students from all over the world. In 2008 the United States tapped the highest share of international students among OECD countries (figure 43).

Figure 43: Market share in international education in 2008 (as % of all foreign tertiary students³) and Times Higher Education World University ranking top 200 (by number of universities listed in selected regions/countries)



Source: OECD, Times Higher Education World University ranking.



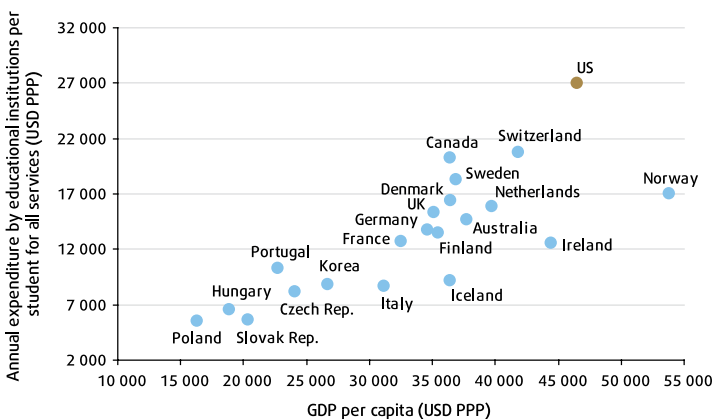
The American population is well educated; the attainment levels for tertiary education in the United States (41 percent) are one of the highest among OECD countries (after Canada: 49 percent; and Japan 43 percent) and grew on average by 1.7 percent per year between 1997 and 2008.⁴ American society places great value on tertiary education, and the OECD estimates that the net wage premia per year for obtaining tertiary education exceeded 8 percent in the United States.⁵

Road to reputation

Having the best providers of tertiary education is not an easy accomplishment. As pointed out by Salmi (2009), one needs not only excellent research teams but also innovative curriculums and teaching methods. How have American universities managed to be so successful?

The most obvious explanation could be that American excellence stems from higher spending per student. Indeed, the annual expenditure of educational institutions per student amounts to US\$27,010 in comparison to OECD average of US\$12,907 in 2007.⁶ Private expenditure at the tertiary level among OECD countries is the highest in the United States, according to OECD. High levels of expenditure seem logical when GDP per capita is taken into account: the richer the country, the more its educational institutions are able to afford (figure 44).

Figure 44: Tertiary education in 2007: Expenditure of educational institutions per student versus GDP per capita (USD PPP) in selected OECD countries



Source: OECD (2010).

In 2007 the United States had the highest ratio of annual expenditure by educational institutions per student to GDP per capita (amounting to 58 percent) among OECD countries. By contrast, Canada had the ratio of 55 percent, the UK 44 percent, and Germany 39 percent.⁷ Having substantial resources for faculties and students gives universities a good start; plentiful funding lures talented researchers and they can pursue their interests with less financial restraint. The findings of Aghion et al. (2007) show a positive correlation between total expenditure per student and a country's performance in research. This is also a strong incentive for students, as they are able to learn from the best scholars in the field.

However, having large budgets is not enough. Some research finds that with generous financial resources universities need autonomy over budgets to succeed. There is a positive correlation

between level of autonomy and research performance, especially in terms of employment and setting wages (Aghion et al., 2007, 2008). The governance of American universities and their level of autonomy depend greatly on the legal framework of a particular state. Overall, US universities seem to be more independent than their European counterparts, especially in terms of sources of funding and remuneration. The autonomy derives also from diversification of funding sources. Leading American universities receive support not only from federal and state authorities and students but also through other sources: particularly donations from private enterprises, foundations, and alumni. Some major research universities like Harvard have large endowments that are invested and managed. This allows them to be more independent from the state in terms of employment, setting salaries, and conducting research activities. (Other countries follow suit; according to the OECD, growing numbers of universities are diversifying their sources of funding.) In addition, thanks to the Bayh-Dole Act (introduced in 1980) the property of government-funded inventions can be transferred to universities, allowing for further development and commercialization.

Unlike some European universities American universities are not democratic. They are in many cases governed by board of corporation that is in charge of managing the entity, including appointments and salaries. Students are more clients than stakeholders. Thus, US universities with independent budgets and wages face much greater competition from each other than their European counterparts. The competitive system reinforces peer learning, development of innovative curriculums, and the diffusion of policy solutions across the states.⁸

Although Ivy league universities often are most associated with American tertiary education, the system offers students a variety of choices. Out of all graduates in 2008 34 percent earned qualifications requiring more than three years of study (OECD average: 6 percent), 44 percent earned four-year bachelor degrees (OECD 43 percent), 20 percent earned master degrees (OECD 16 percent), and 2 percent earned doctorates (OECD 2 percent).⁹ The role of diversification was recognized by policy makers in many US states. For example, in California reforms of the tertiary education system (California Master Plan for Higher Education) in 1960 introduced community colleges, the Universities of California, California State University, private universities, and junior colleges. The case of California also shows the autonomy and flexibility the universities have: the California Master Plan was negotiated by leaders of universities and colleges in the state rather than governmental officials.

Finally, an important strength of American universities is their ability to attract foreign students and scholars. The United States tapped the highest share of international students (18.7 percent) among OECD countries.¹⁰ In addition, international students accounted for 28.1 percent of all students enrolled in advanced research programs.¹¹ Students are attracted by the excellent quality of teaching that derives from a diverse and talented pool of staff. American universities managed to get the best scholars due to various reasons, including financial incentives: average remuneration for researchers in the United States stood at €62,793, in comparison to EU25 average of €40,126.¹²

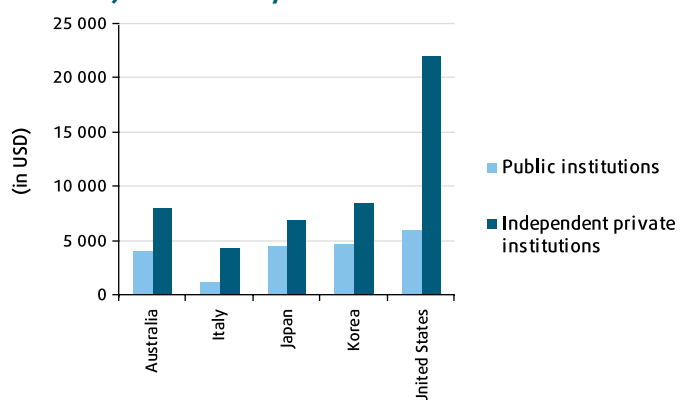
The brand, the cost, and the future

Globalization and mobility of international students and scholars changed the way top national universities do business, making them compete in a much broader, global market. American universities seem to be the most successful the on international education market, but there are



some challenges ahead. Recent growth in tuition costs in state and private universities make education less affordable, in spite of states subsidies and federal government loan aid (figure 45). However, Chapman and Tulip (2008) argue that rather than tuition, cost of living and alternative cost of not working during studies are the main barriers for prospective students.

Figure 45: Annual average tuition fees in USD charged by institutions (for full-time students) in academic year 2006–07 in selected OECD countries¹³



Source: OECD (2010).

Due to high tuition costs, a system of student-income contingent loans was introduced in 1993, based on private student loans with government subsidization of parts of the loan. This solution was reformed again in March 2010, when new loan solutions replaced private loans with a government loan scheme. On average, in the academic year 2006–07, 38 percent of students benefited from public loans or scholarships/grants, which was lower than in Sweden (50 percent) but higher than in the Netherlands (21 percent), and New Zealand (24 percent).

During the recent crisis, state universities faced cuts in funding, pushing the pressure to slash expenses or raise tuitions. Some kept the wages flat or even decreased them, others increased student fees. As universities invest on the market to raise funds, they become dependent on economic performance. In the 2008–2009 fiscal year, the total value of Harvard’s endowment was down by nearly 30 percent to US\$25.7 billion. On average, colleges and universities lost 23 percent in endowments in the respective period.¹⁴ However, when the market recovers, private universities will most probably recoup their losses, while public ones may face limited state spending, hence leading to greater gap between those two groups. There is also a threat that the focus of many universities has shifted too much from teaching toward research, with researchers often receiving higher remuneration than teachers.

American universities successfully address two important issues: a growing demand for tertiary education, and limited capacity and public funding. A diversity of academic opportunities helps target different educational needs, while abundant funding and favorable governance allow top universities to attract world scholars, students, and companies, channeling knowledge into ideas, innovations, and business solutions. Universities enjoy autonomy and diversity in funding, which is important in setting standards. Finally, the American example shows that universities need three crucial features to flourish: a pool of talents, abundant resources, and favorable governance.

Sources

- Aghion Philippe, Mathias Dewatripont, Andreu Mas-Colell, and André Sapir. 2008. "Higher Aspirations: An Agenda for Reforming European Universities." Bruegel Blueprint Series vol. 5. Brussels.
- Aghion Philippe, Mathias Dewatripont, Caroline Hoxby, Andreu Mas-Colell, and André Sapir. 2007. "Why Reform Europe's Universities?" Bruegel Policy Brief 2007/04. Brussels.
- Alison, Richard. 2009. "Deliberate Diversity: Cambridge and UK Higher Education System." Speech delivered at annual address of the Vice-Chancellor at Cambridge University: October 1.
- Chapman, Bruce, and Peter Tulip. 2008. "International Dimensions in the Financing of Higher Education." Center for Economic Policy Research, Australian National University, Discussion Paper no. 574. Canberra.
- Duderstadt, James. 2009. "Current Global Trends in Higher Education and Research: Their Impact on Europe." Dies Academicus 2009 Address in Vienna at Universität Wien.
- Healy, Beth. 2010. "Harvard Endowment Leads Others Down." Boston Globe, January 28.
- Jacobs, Bas, and Frederick van der Ploeg. 2005. "Guide to Reform Higher Education: A European Perspective." Panel Meeting of Economic Policy, London: October.
- McLendon, Michael, Donald Heller, and Steven Young. 2005. "State Post-secondary Education Policy Innovation: Politics, Competition, and the Interstate Migration of Policy Ideas." *Journal of Higher Education* (76):4.
- OECD (Organization for Economic Cooperation and Development). 2010. *Education at a Glance 2010*. OECD: Paris.
- Salmi, Jamil. 2009. *The Challenge of Establishing World-Class Universities*. World Bank: Washington, DC.
- Santiago, Paulo, Karine Tremblay, Ester Basri, and Elena Arnal. 2008. *Tertiary Education for the Knowledge Society Vol. 1*. OECD: Paris.

Notes

- 1 The ranking has following criteria: teaching (learning environment), International diversity (staff and students), industry income (innovation), research (volume, income and reputation), and citations (research influence).
- 2 Conducted by the Center for World-Class Universities and the Institute of Higher Education of Shanghai Jiao Tong University, China. The ranking is based on four criteria: quality of education, quality of faculty, research output, and per capita performance. First published in June 2003.
- 3 Percentage of foreign tertiary students reported to the OECD who enrolled in each country of destination. Reference year: 2008.
- 4 A percentage of population aged 25-64. Source: OECD
- 5 Findings were true for both men and women.
- 6 For all services in 2007 (in USD PPP), OECD.
- 7 For all services, in equivalent USD PPP.
- 8 McLendon et al. (2005) find strong evidence for policies diffusion across the US states.
- 9 Degrees with cumulative theoretical duration of at least 3 years are considered to be at tertiary level and part of the Bologna structure¹ (first degree) – OECD methodology.
- 10 OECD, reference year: 2008.
- 11 Domestic and international students, OECD, reference year: 2008.
- 12 In 2007, currency: EURO PPP. Source: Salmi (2009).
- 13 Countries selected according to availability of the data.
- 14 National Association of College and University Business Officers and Commonfund survey.