A COMPARISON OF THE ORGANIZATION OF HIGHER EDUCATION SYSTEMS IN FRANCE AND THE USA

Alain Alcouffe and Jeffrey B. Miller
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Abstract

Countries have many different ways of organizing higher education. Because of the high costs of higher education, reform efforts, of which the Bologna Process in Europe is an example, are underway in many places. Even where explicit governmental reform processes are less important, economic pressures are bringing about changes. This paper compares the higher education systems in the USA and France. They have been chosen for our study because the problems of high achievement, reasonable economic costs and accessibility are shared values, but their systems are organized very differently.
A COMPARISON OF THE ORGANIZATION OF HIGHER EDUCATION SYSTEMS IN FRANCE AND THE USA

Counts differ greatly in how they organize their higher education systems. France and the US have very contrasting systems: the US system is very decentralized and French system is very centralized. France is now attempting to move towards a more decentralized system, but there will still be major differences in the two systems. The US higher education system relies heavily on market forces to influence outcomes. If the reforms in France are successful, the system will be more decentralized, but it will be decentralized within a hierarchical system.

Agnion, et.al. (2009) and Estermann and Nokkala (2009) have explored the issue of greater university autonomy across a wide range of countries. We explore similar issues but our approach is somewhat different. By focusing on just two organizational forms, France and the US, we can pinpoint some of the key differences between these very different organizations.

In the next section we describe objectives for higher education in the two systems. The OECD provides extensive data on the performance of higher education systems across countries. We use these criteria to discuss how well France and the US perform on some of these criteria.

In the third section we describe the organizational structure of higher education in France and the US and compare and contrast the relative strengths of the two systems in meeting common objectives. The last section summarizes our findings.

I. Universities and Their Contribution to Social Welfare

Like other institutions in the economy universities employ resources to provide services to society. Clark (1983), in his comparison of higher education systems, argues that defining the purpose of higher education is a fruitless task. While it is possible to state the goals of the university in general terms, these simple statements often have little operational content.  

Even if Clark is correct, university administrators have a responsibility to allocate resources within the university and operationalize the university’s mission. So setting goals for the university, no matter how complex the problem, is still inescapable.

In the US, because of their relative autonomy, setting these objectives is largely the responsibility of university administrators. In France, universities have had little budgetary authority and most decisions are made centrally on the basis of the needs within a discipline. In this environment the struggle to define the goals for universities, as an integration of many disciplines, is thus shifted from the university level to the ministry level.

We will argue below that, given the complexity of the mission, how resources will be expended will be strongly influenced by where the crucial decisions are made. In France where the decisions are made centrally, political factors are much more apparent.

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1 See also Cohen and March (1974).

2 See Musselin (2004), for a detailed analysis of the French situation.
than in the US. Thus the attempts to reform the French system have led to heated political debate and strikes across France.

While the objectives being sought by a centralized system are normally very explicit (even if there are problems with implementation), the goals of the US university system and whether they match social needs is not as straightforward. It was Adam Smith who argued that a market system, led by the invisible hand, would lead to positive social outcomes. It is not clear that autonomous nonprofit universities buffeted by market forces will lead to similar positive outcomes for higher education.

II. The OECD Criteria

The OECD has done extensive work comparing educational systems in thirty different OECD countries. This work is published in *Education at a Glance 2009*. We focus here on a subset of the criteria presented by the OECD. We divide our criteria into three general categories: educational achievement of students, economic costs and accessibility. Unfortunately some data does not exist for some criteria, but it is still possible to get a sense of how the two systems perform.

Under the general category of achievement of students in Table 1 we compare: percentage of population with tertiary education, graduation rates, and how well the education of graduates match the skills needed in the labor force.

In 2007 in France 27% of the adult population between 25-64 had a tertiary education; compared with 40% of the US population, but looking at only 25-34 year olds the percentage in France is actually higher, 41% versus 40% in the US.

Graduation rates are another indicator which can be used to describe how successful university programs are. Drop out rates have been a growing concern in both the US and France. Here the US system does not perform well. Its graduation rate for A-type tertiary education (for high skilled jobs) is slightly below both the EU19 and the OECD averages. The OECD does not report these calculations for France, but it does give figures for the percentage of students who eventually get a tertiary degree. On this measure France does very well with 79% of its students eventually getting a degree. This reflects the fact that many students in France who start in an A-type tertiary program switch to a B-type program and then graduate.

When it comes to skill matches, the OECD measures the percentage of 25-34 year olds with a tertiary education who are employed in skilled jobs. On this measure France does much better than the US. 74% of young French adults with tertiary education are employed in skilled jobs versus 63% in the US. These pronounced differences in the employment characteristics of adults with tertiary education are similar for older adults in the two countries as well.
Table 1: Educational achievement

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<th>France</th>
<th>United States</th>
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<tr>
<td>Percentage of population</td>
<td></td>
<td></td>
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<tr>
<td>with tertiary education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>between 25-64</td>
<td>27%</td>
<td>40%</td>
</tr>
<tr>
<td>between 25-34</td>
<td>41%</td>
<td>40%</td>
</tr>
<tr>
<td>Graduation Rates (first time</td>
<td>Not</td>
<td>36.5% (slightly below EU19 average 36.7%)</td>
</tr>
<tr>
<td>graduation A-level tertiary)</td>
<td>reported (79% eventually get a degree)</td>
<td></td>
</tr>
<tr>
<td>Graduates in skilled jobs</td>
<td>74%</td>
<td>63%</td>
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The second general category, economic costs, measures the relative efficiency of the higher education system. (See Table 2) Two OECD indicators of economic costs are cost per student (in purchasing power parity terms) and percentage of GDP. Cost per student in the US is a little more than $25,000 per student, while the cost per student in France is just under the OECD average of $12,000. If research expenditures and other ancillary expenditures are excluded, then the numbers are somewhat smaller and the ratio of US to French costs is even higher. These relationships are similar if we look at percentage of GDP spent on tertiary education. The US spends 2.9% of GDP on higher education whereas France spends 1.3%. The OECD average is 1.4%.

Table 2: Economic Costs

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<th>France</th>
<th>United States</th>
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<tr>
<td>Cost per student</td>
<td>$12,000</td>
<td>$25,000</td>
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<tr>
<td>(Purchasing power parity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of GDP</td>
<td>1.3%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

The last general category in our comparison is accessibility. The US system is noteworthy for having very high tuition. To provide accessibility for lower income students, US universities provide an array of financial support programs that are largely based on financial circumstances. The French system, by contrast, has very low fees. While only 21% of students in France benefit from direct financial support based on their parents’ income, many students in large families benefit from other allowances in the framework of family policies unrelated to their studies. This includes housing subsidies and income tax reductions for wealthy families. If we are to include all these various aids, we find the following distribution of the total amount: direct student support, 30%, housing help, 24%, indirect aids, 8%, income tax reduction, 28%, social security, 10%.

Even with the higher tuition costs in the US, 65% of secondary school graduates later attend A-type higher education institutions, compared with the EU19 average of 55%. By comparison, in 2007 81% of French students were receiving the baccalaureate (i.e. graduation from secondary school), of which 77% went onto higher education.
Eventually 55% of French students enter the higher education system. However, if you consider the origin of the students, 82% of French children born in “cadres supérieurs, professions intellectuelles “ accede to the HES whereas only 33% of the children born in unskilled worker families.

From these general measures, we can see that the US system is very expensive relative to the French system. Somewhat surprisingly, given its high tuition charges, a high proportion of secondary students attend higher education institutions in the US. This includes high levels of enrollment of low-income students, 54% of secondary school graduates. This is almost the EU19 average for all students and considerably higher than the 33% in France (Engle and Tinto, 2008). On the other hand, the US system is less successful than the French system in placing its students in skilled jobs.

Other Goals for a University System

Thus far we have focused on how well universities educate their students. While teaching students is a central responsibility of all higher education institutions, many higher education institutions also engage in research and provide community outreach.

US universities vary greatly in terms of how much emphasis they give to these differing activities. The Carnegie Foundation classification system groups higher education institutions based on their mission. Most well known universities are categorized as research universities, but less than 300 of 4300 institutions are listed in this category. Most students attend the 4000 other schools. Indeed, 44% of undergraduate students in the US attend the nearly 1200 two-year community colleges. This diversity is an important aspect of higher education in the US.

III. Organizational Structure of the Higher Education Systems in the Two Countries.

The Structure of Higher Education in the United States and Its Implications for Meeting Society’s Needs.

While US higher education is organized as a decentralized market-based system, government still plays an important role in higher education. As with any market-based system the government provides the framework within which market competition takes place. In this sense it creates the ‘rules of the game’, much as it would in other markets. Government’s involvement in education, however, is more extensive than in most other areas of the economy because the government provides direct support for many higher education institutions, research support in the form of grants and financial aid to students who attend these institutions.

In the US there are basically three types of higher education institutions: private non-profit, private for-profit and state-supported public. About 40% of the schools are state-supported schools, about 40% are private non-profits, and the other 20% are for-profit. Historically, these private for-profit institutions have concentrated on technical training, but that has been changing with the establishment of schools like the University

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3 Although this represents an increase of 60% since 1972, it is still less than the 81% of students from high income families who enroll in tertiary programs. Engle and Tinto (2008) point to the dismal graduation record of these students.
of Phoenix. It is now the largest university in the US with 400,000 students. Still the system of A-type tertiary education is dominated by state-supported universities and private non-profit schools.

In the US direct financial support for higher education institutions comes from the states, not the Federal government. Because of this, states have a larger role in defining the framework within which higher education institutions operate, and there is considerable variation from state to state as to how much control state government exercise over higher education institutions.\(^4\) So even when it comes to defining the ‘rules of the game’ for competition among universities the system is decentralized.

The distinction between public and private universities is not always straightforward. States sometimes provide funding to private nonprofit universities and in some states, state higher education commissions provide oversight over private nonprofit universities as well as public universities.

**Competition**

A key aspect of the organization of higher education in the US is competition among universities. Universities compete for students, faculty and funding. Yet they are in a different kind of competition than would normally be associated with firms in a market economy, because almost all higher education institutions are either state-sponsored institutions or private nonprofit institutions. State-supported institutions compete directly with private nonprofit institutions for students and faculty and some areas of funding as well. In general state-supported institutions charge lower tuition than private nonprofit institutions, especially to students who live within the state which sponsors the institution.

While state funding makes it possible for state schools to charge lower tuition, private nonprofits are still able to successfully compete for students. Private nonprofits often have a reputation that makes them an attractive alternative to state schools. They also offer scholarships to students who come from low-income families.

Thus state-supported higher education and private nonprofit institutions have both been able to survive in competition with one another. The question then becomes what kind of competition is this and does this competition lead to positive social outcomes.

**Goals of Nonprofits**

A higher education system made up entirely of nonprofit firms would act very differently from Adam Smith’s model of a decentralized market economy. In Smith’s model, the pursuit of profit encourages firms to be responsive to market demand and new entry occurs when profit opportunities arise. In a world of nonprofits the incentives for entry are almost by definition very different. For example, in the US many new universities are founded for religious reasons.

\(^4\) Most states have a higher education commission which provides oversight over the higher education institutions. The degree of autonomy that higher education institutions have varies considerably from state to state. Aghion, et. al. (2009) take advantage of this diversity to test the advantages of more autonomy in US universities.
Nonprofits will also have less incentive to expand. The rapid growth of student enrollments in the post-World War II period has been concentrated in the public sector. (See Figure 1) Winston (2001) argues that, because the cost of educating a student exceeds the tuition students pay, nonprofit private universities will be reluctant to expand enrollments. Public universities have expanded more to meet this demand because their funding comes from the public sector, which is pressuring them to expand and provides at least some funding to permit them to expand.

Because they are not subject to the same market pressures as a firm in perfect competition, higher education institutions have the advantage (disadvantage) of having additional freedom, within limits, to set their own agenda. Whether universities pursue objectives which satisfy a social purpose and efficiently use the resources available will depend importantly on how they define their goals.

Figure 1

![Graph of Public and Private University Enrollments in the US, 1959-2005](source: The Digest of Educational Statistics (2007))

In recent years an important barometer of higher education success is the *US News* rankings of colleges and universities. Intended as a resource for students looking for a college, the rankings are now used by schools to measure and promote their success. The rankings are controversial both within and outside of academia.\(^5\) Anecdotal evidence suggests that while they are not the only goal, the rankings do influence decisions.\(^6\) Thus the rankings are being used for a purpose for which they are not designed. In an environment where information asymmetries are a serious concern, the rankings partially fill this gap, but, perhaps, at a cost to society in terms of how higher education institutions are being managed.

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\(^5\) See [http://www.library.uiuc.edu/edx/rankbib.htm](http://www.library.uiuc.edu/edx/rankbib.htm) for a short bibliography of some of the articles about ranking issues.

\(^6\) For a discussion of these issues see Ehrenberg (2002)
The US News rankings are an American response to the absence of good information about universities and how they are performing. Recently other rankings have appeared which rank universities worldwide. One popular ranking is the Academic Ranking of World Universities published by the Institute of Higher Education, Shanghai Jiao Tong University. The dismay in Europe over the low rankings that continental universities received in the Shanghai rankings has lead to proposals to carry out major restructuring in universities in several European countries and has been an important motivation for the reforms in France.

Information asymmetries also have a significant impact on how universities recruit students. When students have so many universities from which to choose, universities seek name recognition. There are a number of ways to give a university visibility: high rankings in US News, athletic teams on television, or perhaps, new buildings and attractive athletic facilities to impress students who tour the campus.

All of these activities are very costly. If viewed from the viewpoint of the Williamson’s (1985) markets and hierarchies framework, these expenditures might be considered transaction costs of operating in a competitive market environment where information asymmetries are significant. Transaction costs are a kind of organization cost, but they do not add directly to welfare.

Some General Comments

We have outlined how a market-oriented decentralized higher education system functions in the US. It is a mixed system of mostly private- nonprofit and publicly-supported institutions. Private nonprofit institutions do not have the incentives to meet the growing demand for education services so the system has become more reliant on publicly supported institutions. Because of the difficulty of defining the overall objectives of publically-supported higher education institutions, elected officials struggle with justifying the ever greater expense of higher education. Recently, tighter state budgets have reduced public support for public institutions. Tuition has been rising rapidly at many state-supported institutions.

The nature of competition in US higher education raises questions as to whether the incentives are appropriate if we want universities to best serve the national interest. Competition does have its benefits, however. A review of the changing enrollments in differing courses of study in higher education in the US suggests that the US higher education system has been adjusting to supply educated workers to sectors of the economy which have been expanding.

The Structure of Higher Education in France and Its Implications for Meeting Society’s Needs.

The principles along which the French higher education system (HES) is organized are simple. Unfortunately many exceptions, which have been introduced during the last two centuries, have obscured the continuously evolving picture.

Like some philosophers and the majority of active revolutionaries, Napoleon favored a state system of public education. State-funded education would provide him
with capable officials and trained officers to man his army. Napoleon established in 1808 the Imperial University which encompassed the three levels of education. The heart of the new system was the establishment of thirty lycées, which provided educational opportunities beyond the secondary schools. Every appeal court district was to have a lycée, completely supported, and controlled, by the state. Scholarships were provided, with about one-third going to sons of the military and government, and the rest for the best pupils from the secondary schools.

Tertiary education was included in a special “order” and distributed into five faculties: among them, theology, law and medicine were devoted to train “practitioners”, arts and science were designed to educate mainly teachers. The University had a monopoly on awarding three degrees, baccalaureat which was the first degree controlling the entry into the University, the licence (licencia docendi) which was a prerequisite for teachers, and the doctorate.

Napoleon kept alive or organized a series of “schools” adjacent to the university devoted to the training the military staff (Ecole polytechnique or Ecole Navale) or civil servants for agriculture, industry, etc. In addition, Napoleon organized a special boarding school for teachers: “L’école normale supérieure” which did not grant a special degree but provided its students with excellent conditions for studying.

Thus modern French HES is divided into two branches, Universities and “Grandes Ecoles.” The former never enjoyed the same prestige as the latter. Research was not considered as an activity on its own merit and was entirely left to the goodwill of the faculty.

After the French-Prussian war, the Prussian victory was ascribed to the superiority of the Humboldt model of universities and more attention was paid to higher education. This led to the creation of the Ecole libre des sciences politiques (1872) and the HEC business school (1881). It still took 15 years before in 1896 provincial universities were reestablished, but under the control and supervision of the recteur so they had no autonomy.

In the turmoil of the 1930’s there were two important changes which affected the HES. In 1934, a legal definition was given to the title of engineer and an evaluation and accreditation process was set up involving not only academics but also employers and engineers’ unions. Secondly, as the research output of universities (especially faculties of sciences) seemed insufficient, a special institution the Centre National de la Recherche Scientifique (CNRS) devoted to research was created in 1939, outside the universities. CNRS proved very effective, but it increased the divide between higher education and research.

After the events of 1968, a movement towards autonomy for the universities occurred in 1969 (loi Faure) and 1984 (loi Savary), but the changes were limited to more self-administration by elected governing bodies while the curriculum, the openings and careers of the professors were decided by the Ministry. The pace of changes accelerated after four education ministers (France, Germany, Italy and UK) signed the Sorbonne declaration in 1998, committing themselves to "harmonizing the architecture of the European Higher Education system"7, a first step toward the Bologna process which aimed to create a European Higher education area.

The basic framework adopted through the Bologna process is three cycles of higher education qualification (Bachelor, Master & Doctoral degree). The goals are to make movement easier from one country to another for the purpose of further study or employment and to increase the attractiveness of European higher education.

The French authorities probably expected that the Bologna process would change the balance of power between universities and schools. By and large, the French universities complied very quickly with the new architecture in line with what can be expected from a highly centralized system but “schools” are reluctant to merge their own degrees into the new framework. In 2009 a new reform was passed which is intended to enhance the autonomy of universities and create PRESs (Pole of research and higher education) which should eventually include “schools” as well as universities and create a more homogeneous HES.

At present the dualism Universities/Schools is still alive and well and deeply rooted in French social structures while the percentage of students enrolled in universities has declined during the past few decades (Figure 2). Actually, schools encompass a great variety of establishments, but the French elites are trained almost exclusively in a few schools. The universities’ master degrees suffer from a lack of prestige vis à vis the certification provided by the schools (especially, engineers).

Figure 2

![Higher Education Enrollment Trends in France, 1960-2006](image)

Source: Repères et références statistiques – editions 2006 & 2009

While the state retains a monopoly on degrees, the title of ingenieurs depends upon a special body “commission du titre d’ingénieurs” created under the 1934 law. This commission includes representatives from schools’ and “ingénieurs” unions, professors and employers. As great prestige is linked to this title, the most prestigious schools are very reluctant to introduce any confusion with « master degrees ».

Here is what is at stake. The French HES can now be divided into two levels – undergraduate and graduate. (See Figure 3) At the undergraduate level, we find a distribution between several tracks:
1) Training of «technicians » (STS) Classes are provided in 1300 lycees scattered at 1000 sites. There are 120,000 students entering annually and 105,000 degrees, including life long training, are awarded. Among these students 25,000 continue their studies. These classes depend upon the Ministry in charge of the secondary education system.

2) The « Institut universitaire de technologie »( IUT) were created in 1964, outside the universities despite their names, as the economy needed employees with better skills and competencies. They were allowed to select their students. Their governing bodies include employers and employees representatives as well as academics. For three decades they have enjoyed a huge success, enrolling 50,000 students and awarding 48,000 degrees. Now a majority of these students continue their study either towards a graduate track in a university or they enter a school (10,000).

3) The paramedical classes fall into a similar category. Around 40,000 students enroll each year and 35,000 graduate.

Source: Goulard (2007)
These three tracks award degrees similar to “associate degrees” and exhibit a very high rate of success, which explains the increase of HES degrees in the population. The remaining tracks are designed to lead to the graduate level where the divide between schools and universities is more obvious. 176,000 degrees are awarded at the master level - among them 35000 are awarded by the schools (35%).

4) Medical studies are organized within the universities (PCEM). About 25,000 students enter each year and about 9,000 graduate. The students who don’t succeed usually switch to other tracks.

5) The Classes préparatoires to the Schools – (CPGE) are scattered among 180 sites and organized in high quality lycees. They attract 38,000 students aiming to enter the best schools through national exams. There are around 500 schools which are mostly outside the universities. Almost 30,000 students will succeed while those who do not enter the normal bachelor track in a university.

6) Eventually the remaining (almost 50% or 200,0000 students) enter the first level in the universities which are obliged to enroll whoever applies. For many students this is a second choice. Therefore, it is not surprising that the dropout rate is around 40%. Many of the students who graduate pursue a masters’ degree.

Some general comments

Despite the high degree of centralization, the French HES has managed to introduce a great variety of tracks and levels. In the 1990s in response to external pressures, even the universities managed to create new masters’ degree programs. These new degrees provide a wider choice of programs for students.

As the French HES evolves, there is now a distinction between evaluation and accreditation. The state still has a monopoly on accreditation (i.e. the approval of programs), but universities now have more control over the content of these programs. So the actual content studied at different universities is no longer the same. Some universities fear their programs will no longer be perceived as equivalent to those at other universities. This is especially a concern in the classical disciplines in the arts (literature, philosophy, history, and the like)

Graduate programs - doctorate and masters focusing on research - remain the stronghold of universities and these programs give them an opportunity to negotiate better relationships with the schools which cannot compete at the international level without strong research links.

Concluding Remarks

France and the US represent two very different ways of approaching higher education. A key factor in future success will be how the two systems adapt to a changing environment. We have seen above that changes in the French system occur with much debate and political input. The US system also adapts, but in a very different way. Universities respond to various forms of competition in order to maintain their status in a world of ambiguously defined objectives.
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