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MEHEM (Mapping European Higher Education Models)

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Country report on France

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\(^1\) IEP - PACTE (CNRS Grenoble Universities), Grenoble, France
Summary of the report

In the 1980s, French higher education and research was characterized by a strong governmental involvement as well as by highly centralized policies. The underlying rationale was that higher education and research could not be entrusted to market forces and required strong State intervention. “Bureaucratic centralism” and “central planning” (Chevaillier, 1998) were supposed to guaranty the fair and equal treatment of all university students and the development of scientific areas considered as national priorities. Consequently, major policy instruments were then: national accreditation procedures for university diploma, the low share of project funding for higher education as well as for research, civil servant status for most of the research and teaching staff, funding or research through national large research programs… At the same time, faculty staff kept a high level of autonomy. Even though the Faure law formally dissolved the old faculties in 1968 and replaced them by teaching and research departments integrated to multidisciplinary universities, one could still characterize French higher education in the 1980s as a “republic of faculties” (République des facultés) (Musselin, 2004) meaning that universities had not emerged yet as strong, autonomous and self-governed institutions. Higher education was then co-managed by the State and by representatives of faculty staff (mostly defending disciplinary interests) (Ferlie et al., 2008).

The relationships between the State, the universities and the faculty staff changed gradually but significantly in the 1990s. The governance of higher education and research became more decentralized and more negotiated; a growing emphasis was also put on the accountability of higher education and research towards diverse stakeholders. In the field of higher education, important instruments for these changes were the introduction of a contractual policy between the State and the universities (which was a clear starting point for the emergence of French universities as institutions) and the involvement of local and regional institutions. In the field of research, changes occurred through the raise of project-funding, increased collaboration for between universities and research institutions leading to the creation of “mixed research units”… At that time reforms were not driven by market pressures nor were they inspired by references to international standards and models (Musselin, 2000). In some cases (e. g. the contractual policy) changes were theorized after their implementation (ibid.). The drivers for changes were mostly internal and they were linked to some limitations associated to centralized planning and steering.

Finally the beginning of the 21st century shows some acceleration in the reform process of higher education and research, above all with the adoption of a new budgeting and accounting system (LOLF) in 2006 and with the granting of institutional autonomy to universities (law on autonomy, 2007). Some new policy instruments stimulate the role of market or quasi-market mechanisms: competitive project-based funding for higher education and research, development of performance measures (instead of ex-ante control), increasing links between funding and evaluation.

However, market-based reforms remain limited in comparison with other countries (Ferlie et al., 2008). Moreover, even though New Public Management Ideas strongly influences the implementation of some instruments (such as the LOLF), it appears that two other rhetorics also influence the action of French reformers (ibid.): the network and multi-level governance (emphasizing the development of “horizontal” or lateral links and of territorial coordination between various stakeholders: higher education institutions, public research organizations, private companies, local and regional authorities….) as well as the neo-weberian theories of State modernisation (fostering the raise of regional governments or preserving the idea of a public service performed by civil servants…).
1 Introduction

This report deals with the governance of French higher education and research in the post-1980 era. It highlights the changes which have occurred since in the governance interplay between governments, academics (faculty staff and senior management), markets and other stakeholders.

The report starts with an overview of the field structure for higher education and research (2). It then successively analyses the three main processes of funding (3), recruitment (4) and monitoring (5).
2 Field Structure

2.1. The higher education field

2.1.1 Field structure for higher education

Over the last two centuries, French higher education has grown as a complex system, deeply divided between non-selective public universities which are open to all high school graduates and highly selective « grandes écoles ». Other higher education providers are also to be found in-between applying various selection devices. Table 1 pictures how fragmented the institutional landscape of French higher education is:

Table 1: French higher education institutions

<table>
<thead>
<tr>
<th>Year of study in higher education</th>
<th>University or internal institutes and schools</th>
<th>Other higher education institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>License degree</td>
<td>CPGE</td>
</tr>
<tr>
<td>2</td>
<td>IUT STS</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Professional license degree</td>
<td>Engineering, business, social and paramedical schools</td>
</tr>
<tr>
<td>4</td>
<td>Master degree</td>
<td>IUP</td>
</tr>
<tr>
<td>5</td>
<td>IUFM</td>
<td></td>
</tr>
<tr>
<td>6-8</td>
<td>Doctoral schools (most often in association with other higher education institutions such as engineering schools).</td>
<td></td>
</tr>
</tbody>
</table>

CPGE preparatory classes for grandes ecoles
IEP Institutes for Political sciences
IUFM Teachers’ training university institutions
IUP Professional University Institutes
IUT University Institutes of Technology
STS Higher technician sections

a) Public universities
There are 81 public universities in France in 2008, dispensing national diplomas (licence, master and doctoral degree), and organised into disciplinary training and research units (Unité de Formation et de Recherche, UFR). They are non-selective institutions, open to all high school graduates. Non-selectivity, together with the highly centralised steering of universities by the State, should guaranty the core values of the “French model” of higher education,
which are universality and non discrimination (fair and equal treatment of all students). This myth is however quite far of reality, since universities have known a deep move towards more autonomy, selectivity, and regional concurrency, first within internal processes, and now with the 2007 LRU law on autonomy.

b) *Internal institutes and schools*

University teacher training institutes (IUFM) were created in 1989 to face a second wave of massification in French secondary education (the first one going back to the 1960s). They are attached to one or several universities or other State institutions of learning, whether scientific, cultural or vocational.

Several institutes were also created in order to develop professional oriented curricula within the universities: University institutes of technology (IUT, created in 1966), professional licence degrees (Licence professionnelle, created in 1989), and professional university institutes (IUP, created in 1994). As the later graduate students after four years of study, they don’t fit easily into the Bologna process so that their future is nowadays uncertain.

Finally universities include institutes for political studies (IEP, created after the Second World War), which select students on the basis of entrance exams.

Admissions to all these curricula are based on an application process involving an interview or entrance examinations. This selection process occurs either just after the high school graduation or after two or three years at the university. Furthermore these institutions benefit from different degrees of institutional autonomy within the universities. Some of them such as the IUT have their own special prerogatives (the director has control of income and expenses and has authority over the entire staff).

c) *Other public higher education institutions*

Some public higher education institutions are located outside universities and they come under the authority of various ministries (Higher Education, Defense, Agriculture, culture…). Preparatory classes for “Grandes Ecoles” (CPGE), engineering and business schools, and Grandes Ecoles themselves are included in this category\(^2\). Engineering and business schools usually select students on the basis of competitive entrance exams which take place after two years of preparatory classes. Most of them are far less selective than the most famous “grandes écoles” and they are usually not included into them. These Grandes Ecoles are mostly under the control of the higher education ministry. These elite institutions symbolize the French model of meritocracy: even though the entrance exams are highly competitive, applications are open to all high school graduates and they reward the laureates with a special status: for instance, students of the ENS (considered to be among the most prestigious of the Grandes Ecoles) have the status of “civil servants in training” and therefore receive a salary for the duration of their studies (around €1400). In exchange, the students sign an agreement to work at least ten years (starting with their first year in school) for State or local administrations or public companies.

\(^2\) For an exhaustive list, see for example: EURYDICE (2008) The Education System in France. European Commission. pp. 120-121
The enrolment in universities has slightly decreased over the last decade, at the benefit of other higher education institutions, such as engineering, business or social schools, which represent the most important education institutions outside universities (table 3).

**Chart 2. Enrolment outside universities, 2007-2008.**

Private education providers play a limited role with about 20,000 students enrolled in private higher education institutions. Those who are accredited by the State are eligible to receive subsidies, teachers from the public sector (by loan), and their students have the possibility to obtain public-sector scholarships. Accredited institutions are supervised by the recteur of the académie (see below) who controls student enrolment and approves the appointment of the teaching staff.

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*Source: French National institute for Statistics and Economic Studies*

http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATTEF07113
2.1.2 Field structure for public research institutions

The field structure for public research institutions deserves special developments because it has been historically set-up apart from the field of higher education. Indeed, French governments chose after WWII to reorganise public research around large public research organizations (PRO) which are generalist (the interdisciplinary CNRS or the National scientific research centre which is the largest European research institution) or mission-oriented (see Table 2)

Table 2. French public research organizations

Main EPST:

<table>
<thead>
<tr>
<th>Name</th>
<th>Mission</th>
<th>Staff</th>
<th>Date of creation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNRS</td>
<td>Interdisciplinary research</td>
<td>26,550</td>
<td>1939</td>
</tr>
<tr>
<td>IRD</td>
<td>Development research</td>
<td>1,654</td>
<td>1944</td>
</tr>
<tr>
<td>INRA</td>
<td>Agricultural research</td>
<td>8,633</td>
<td>1946</td>
</tr>
<tr>
<td>INSERM</td>
<td>Health and medical research</td>
<td>5,162</td>
<td>1964</td>
</tr>
<tr>
<td>INRIA</td>
<td>Informatics and artificial intelligence</td>
<td>992</td>
<td>1967</td>
</tr>
</tbody>
</table>

Main EPIC:

<table>
<thead>
<tr>
<th>Name</th>
<th>Mission</th>
<th>Staff</th>
<th>Date of creation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEA</td>
<td>Nuclear energy research</td>
<td>11,857</td>
<td>1945</td>
</tr>
<tr>
<td>ONERA</td>
<td>Space and aeronautics research</td>
<td>1,725</td>
<td>1946</td>
</tr>
<tr>
<td>BRGM</td>
<td>Mining and geology</td>
<td>920</td>
<td>1959</td>
</tr>
<tr>
<td>CIRAD</td>
<td>Agricultural research for development</td>
<td>1,853</td>
<td>1984</td>
</tr>
<tr>
<td>IFREMER</td>
<td>Marine and fisheries research</td>
<td>1,375</td>
<td>1984</td>
</tr>
</tbody>
</table>

Source: after (MESR, 2002)

The EPST (public organizations for scientific and technical research) are mission-oriented, but they are increasingly driven by scientific standards rather than sectoral interests only. They are under the control of various ministries (Higher Education and Research, Agriculture, Trade and Industry...). Most of the administrative, scientific and technical staff is civil servants. On the other hand, PRO with the industrial and commercial status (EPIC, établissements publics à caractère industriel et commercial) are also involved in commercial,
industrial activities, with employees being recruited on rules governing private employment, and financial rules being those of the private sector (Laredo and Jolivet, 2002).

This policy set the basis for what would be seen during decades as French specificities in the international landscape (Thèves et al., 2007): the weakness of university research, performed in university laboratories suffering from a lack of funding in comparison with the laboratories hosted by the large PRO; the lack of research councils distributing funding to research groups; finally a low rate of project funding.

However, major changes occurring since the 1970s have increased the similarities between France and other European countries and they have challenged the traditional view of the French “exception”.

Starting from the earliest change, the creation of “mixed research units” blurred the boundaries between universities and PRO. In the 1960s, the CNRS started to establish partnerships between its research groups and university laboratories in order to strengthen university research. Association to the CNRS is granted for four years after an evaluation by the CNRS. It implies recurrent Cnrs funding as well as the mutualization of administrative, technical and scientific staff. Other large PRO such as Inra or Inserm followed the same direction. Mixed research units are thus the new organizational standard, involving universities into the French research field (Larédo and Mustar, 2001) pp.60-61: in 2002, four out of five CNRS units are mixed research units (UMR).

There are other features indicating closer collaborations between universities and PRO and showing that universities emerge as strategic actors for research. Universities are in particular responsible for doctoral education which is performed in doctoral schools affiliated to universities. Doctoral schools were created in 1992 and they are mandatory since 1999. Every research department which wants to hire PhD students must now belong to a doctoral school. They provide students with a curriculum which includes professional training and, maybe most importantly, they allocate the doctoral grants from the Ministry of Higher Education to research departments.

Two recent reforms also aim at bringing together PRO, universities and other higher education institutions within a region and at creating a few centers of excellence. First, the 2006 law on research organization created the research and higher education poles (PRES or Pôles d’Enseignement Supérieur et de Recherche), in which universities, PRO and other higher education institutions are brought together. The major goals of this mutualization policy are economies of scale on the one hand, international visibility and attractiveness on the other hand. PRO and universities selected by the ministry to create a PRES obtain a four-year contract with substantial funding. 9 PRES have been created in 2007. Secondly, the “plan Campus” creates a few centers of excellence. 12 projects have been selected in 2008 and will start in 2009. Both reforms (the PRES and the plan Campus) put some universities at the center of the French research. On the other hand, they break the French myth of equal universities while accentuating the already existing hierarchy and competition between research universities which will benefit from these new labels on the one hand and teaching-oriented universities on the other hand.

Finally, the creation in 2005 of the National Research Agency brought a significant change in the public research funding system (Thèves et al., 2007), by raising project-oriented funding of academic research (see below). Its creation raises the highly controversial question of to what extend the CNRS should develop its role as a funding agency (open to all public laboratories) while reducing the number of its laboratories. It is widely recognized that CNRS labs have shaped many scientific areas (and more specifically those areas which required
massive investments out of reach for universities, such as large scale equipments in physics). However, universities weaken its dominant position as they emerge as strategic actors in the national policy for research and as they collaborate on equal footing with the CNRS for the running of the mixed research units.

2.2 Regulatory frameworks

Universities are managed by a central administration belonging to the Ministry of Education (Direction Générale de l’Enseignement Supérieur). The head of this administration (directeur de l’enseignement supérieur) is appointed by the Minister for higher education. Its mission is to implement the governmental policy for higher education. More specifically it is in charge of the budget allocation to the universities, the allocation of employment positions, the negotiation of the four-year contracts, etc…

On the regional level, the ministry is represented by the « recteur », who is the head of the regional education administration, the « rectorat ». He is both representative of the minister for higher education and « university chancellor ». As a representative of the minister, the rector supervises the implementation of all legislative and legal measures related to education. He also keeps the minister informed of the running of the institutions. As chancellor of the universities, the rector takes on a specific mission of control of autonomous institutions. Represented within the administration council of higher education institutions, he can for instance call upon an administrative tribunal to request cancellation of decisions made by institutions authorities which appear to him to be illegal.

In the recent past, the steering of higher education by the ministry presented most of the characteristics of “bureaucratic centralism” (Chevaillier, 1998) and it followed a “standardized, centralizing, egalitarian model” (Musselin, 2004). Standards and uniform rules were the main instruments for this bureaucratic regulation, as shown by the national procedures organizing the accreditation of higher education curricula.

Most higher education degrees are “national”, which means that they are recognized or accredited by the ministry. In addition, higher education institutions can also offer degrees under their own responsibility (university degrees).

For a long time, the curricula leading to national degrees were defined centrally (number of teaching hours, proportion of lectures, seminars, etc…). The accreditation system used to be mostly bureaucratic, the ministry controlling the conformity of the curricula to nationally defined quantitative and procedural criteria rather than assessing the quality of the programs. The implementation of the Bologna process which started in 1999 has not put an end to the national accreditation of degrees. However it introduced a more quality-based conception into this accreditation procedure. Curricula are evaluated by experts and validated by the national council of higher education and research (CNESER) (Kletz and Pallez, 2001). The introduction of the LMD structure was meant to introduce performance-based evaluation for new and current curricula and to “rationalize” higher education while reducing the number of degrees. However, several studies show that these expectations haven’t been met yet as “the lack of regulation both at the university and at the ministry levels combined to the pro-active strategies showed by the ‘academic tribes’ have led to the inflation of the curricula offerings and its resulting unreadability” (Barraud and Mignot-Gérard, 2005).

Evaluation procedures now come under the jurisdiction of the higher education and research evaluation agency (AERES) created in 2006 (see below). This agency has clear prerogatives to exert quality control over higher education curricula. It is emblematic of a new higher
education policy oriented towards the adoption of European quality assurance standards within higher education system.

Conclusions

Field structure for higher education. French higher education system is still a dual system, divided between non-selective public universities and highly selective “grandes écoles” or other outside-universities institutions. Even though this discrepancy between “mass universities” on the one hand and “elite schools” on the other hand raises a strong debate, selection procedures within universities are even more sensitive issues. Many analysts denounce the egalitarian and meritocratic definition of the mass university (which is deeply rooted in the French culture) as a myth. In deed, many free accessible curricula are crowded with students whose grades aren’t good enough to get into the selective ones, so that there is a de facto selection through high drop-out rates: nearly half of French university students fail to complete their first year of studies successfully and about 90,000 leave every year without a qualification. Therefore, there are fears that the “law on autonomy” adopted in 2007 and granting more institutional autonomy to universities (see below) will increase the differentiation and raise competition between universities as it may give them more freedom to select students and more financial resources to attract selected populations.

Field structure for research. Significant changes are challenging the traditional view of the French research system as a dual one with strong PRO on the one side and weak university laboratories on the other. The first one is the growing intertwining between universities and research institutions, with universities moving from the periphery (1960s) to the centre of the French research system. The second change is related to the raise of funding agencies, which were marginal in a post-war system built around mission-oriented research institutions. Some agencies (such as the national agency for research created in 2005) but traditional actors such as the PRO and the ministries behave as funding agencies, attributing project funds to research teams for a limited period of time (Thèves et al., 2007).

Regulatory framework for higher education. France still keeps some features of the “bureaucratic centralism”. However, the model underlying this centralism (that of uniformity and “equal treatment” of all universities by the ministry) has been deeply shaken by the combined pressure of higher education massification and the internal differentiation of the university itself (Musselin, 2004).
3 Funding

3.1 Allocation to research

A recent study by (Thèves et al., 2007) documents how the funding of French public and private research has evolved over the last two decades. The authors interestingly nuance the traditional view of the French “specificities”.

1. The allocation of resources by the state concentrates on core funding rather than on project funding, even if the share of project funding has doubled in two decades. The level of project funding remains lower than in other countries.

Chart 3. Structure of public funding, 1982 and 2002 (Thèves et al., 2007)

2. However, the state is not the only provider of project-funding. It represents only 41% of the allocated funds, whereas funding from the EU represents 32% and funding from intermediary agencies (ANVAR which focuses on small and medium enterprises, CNES or the French space agency, ADEME for environment technologies…) represents 27%. Thus the increased rate of project funding is mostly explained by the growing importance of European funding sources.

3. Even if the rate of project-funding is lower in France than in other European countries, one should not overestimate French specificities, as argued by (Thèves et al., 2007). Indeed the allocation of resources from the main PRO (CNRS, INSERM, INRA…) to their joint laboratories, especially the allocation of permanent research and technical staff, is conventionally interpreted as core funding. However it has many similarities with project-based funding: it is highly competitive and it requires fund-raising practices at the laboratory level. Considering that PRO are already playing the role of funding agencies and more specifically of “human resource granting agencies” (ibid.) thus highlights the importance of project-funding for French public research.

Finally, the creation of the National Agency for Research (ANR) in 2005 is considered as step towards a European standard model where large funding agencies play a major role. The 2010 objective of the ANR is to finance academic research projects at the level reached by all PRO for fundamental research.

3.2 Allocation to Education: Public funding

Up to now, state universities in France have been exclusively funded by public institutions. They haven’t been able to receive outside funding from corporations and outside sources. However, this will change with the Law on autonomy (LRU): Universities are allowed to create public or private foundations in order to rise non-government funding. Private funding will enable them to buy teaching material, to hire PhD students, to plan building projects, etc.

The ministry allocates two types of teaching resources to universities: operational budgets on the one hand, teaching posts and salaries on the other hand. The last decades have been characterized by a highly centralized allocation of resources and by the use of complex funding formulae. This centralized procedure aimed at ensuring a “fair and equal” treatment of every student, according to the egalitarian model of French universities.

80% of the operational budget, as well as the number of teaching and administrative staff⁴, actually depend on quantitative criteria, mostly on the number of registered students in the various curricula. The calculation rules called SanRemo (Système ANalytique de REpartition des MOyens), was introduced in 1993. It is based on standard costs per student, the teaching grant being made up by multiplying this cost by the number of students enrolled in the corresponding programmes (Chevaillier, 1998).

The rest (20%) of the operational budget is nowadays allocated on a contractual basis. The contractual policy was introduced in the 1984 law on higher education with four-year contracts (contrats d’établissement) between the ministry and each university. They were then limited to research and they were extended to all activities in 1989. The launching of this contractual policy was in line with a broader expansion of contractual relations within the French government and a variety of public institutions (local authorities, public enterprises, public agencies…), to face the limits encountered by the central steering of the economy (Chevaillier, 1998).

Universities rank their priorities in a strategic plan (projet d’établissement), on the basis of which the ministry provides a “project grant” where universities have to define precisely how they will spend the money. Even though these financial resources are linked to notions of “performance” regarding teaching and research, the performance assessment remains a

⁴ See below the section on recruitment. The salaries were paid by the French ministry of Education on a separate budget.
formality without consequences on the next budget allocations. However, the contractual policy brought structural changes in the relationships between the universities and the ministry. As shown by C. Musselin, it gave new tools and more space for universities to be involved in negotiation procedures with the state, implementing in-depth a new framework, going from a centralized and bureaucratic model to more autonomy and negotiation (Musselin, 2000).

The legislative framework for the funding of universities has recently been deeply modified with the enactment of new public budget procedures (LOLF or “loi organique sur la loi de finances”) in higher education since 2006 as well as with the law on autonomy (2007).

The LOLF aims at implementing performance-based management in the public services in general and in higher education in particular. The state budget is now broken down in missions which correspond to the State’s major public policies. Each mission comprises a set of programmes (150 programmes altogether) which are then broken down into sub-programmes (actions). This structure gives the public agencies that work on those actions more insight on the contribution they are expected to deliver.

Higher education and research correspond to a single mission which is divided into 12 programmes. Ministries for higher education and research have to write an annual performance plan (PAP) which describes the objectives for the programmes and defines indicators of performance. As an input for this PAP universities (and other higher education institutions) have to deliver information on those indicators. They also operationalize the national objectives of the program in their four-year contract with the State. Therefore the implementation of this new budgeting and accounting system can be seen to a certain extent as the continuation of the contractual policy. Contracts signed after the implementation of the LOLF have to focus on objectives which have to be in line with national priorities and which have to be assessed by a set of indicators.

However, as argued by Ferlie and colleagues (Ferlie et al., 2008), even though this label is absent from the political discourses, the LOLF is also strongly influenced by the New Public Management ideas. In deed, the contractual policy gives the periphery (here the universities) operational freedom to act within the strategic framework designed by the center (here the State). Moreover, the LOLF introduces strong performance measurement (see below: section on “monitoring”) in order to assess the efficiency of resource allocation to universities. Finally, (Ferlie et al., 2008) argue that, by contrast to other countries, there is little emphasis on market-based reforms such as the development of real prices for teaching fees and research contracts or the stimulation of competition for students between higher education institutions, encouragement of private sector providers to enter the market, and introduction of higher student fees to empower students as consumers.

Finally, the recent “law on autonomy” (2007) introduces a major change in the allocation of resources to universities. The 20 first universities which have been granted autonomous status by the government will negotiate a “global budget” in their four-year contract. They will spend this budget as they choose between operational budgets, staff recruitment, increased salaries... Salaries will for the first time be included in this global budget.

The law on autonomy provides universities with some of the management tools required by the LOLF. For example, it enables universities to implement the so-called “asymmetric fungibility” of budgets allowed by the LOLF: personnel expenditure can be used to

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5 As stated below, the law actually introduces a competition between universities for foreign students.

6 Other dimensions of the law on autonomy which concern recruitment and monitoring issues are presented in the newt section.
complement other types of expenditure, but they cannot be increased from appropriations for other budget classes.

3.2.1 Student funding

Public Higher education costs are covered almost entirely by the Government and tuition fees are quite low. The government’s share of the funding of higher education is predominant (approximately 76%), the share of households being 9.4%. There are two kinds of fees. Basic fees are determined by the Ministry and not the universities themselves, thus guaranteeing the “fair and equal” treatment of students in all public Universities. A basic fee for an undergraduate course in 2008/9 is €169 per year; for a masters course €226 per year; for a PhD it is €342 per year. In addition, students are expected to pay social security charges of between €200 and 300 euros per year. Universities can also charge specific additional charges for certain services (called “pedagogical” tuition fees) whose amount has to be approved by the Ministry. These additional fees usually do not exceed €1000, but they are expected to increase as the law on autonomy will give Universities greater discretion to impose their own charges. Finally, private higher education institutions set their own tuition fees which are generally higher (between €1450 and €5800 annually).

Systems for supporting students (grants, loans, etc.) French students are mainly supported by grants and there are very few loans compared to other countries. Only French students of 26 and under, preparing a national diploma or recognised university diploma, showing due proof of eligibility and studying full-time, may apply for a grant. In 2005, 30% of the enrolled students awarded a grant. 95% of them were awarded a grant on social criteria. These grants are mostly attributed on the basis of the student and his family’s income and their expenditure. The rest (5%) was awarded a merit grant. These grants are attributed on academic criteria, for example to students who obtain the special mention “very good” the first time they take the baccalauréat exam.

Procedures for the selection of students (national vs. local selection, grades vs. tests, etc.) As mentioned in the first section, everyone holding a baccalauréat degree can get into the first year program of any Licence degree. However, there is some regional selection: a student can get into all universities located in the region where he takes his baccalaureat. If he wants to study in another region, he will have to justify his choice (for instance to prove that his field of study is not available in any universities of his region). The teaching programmes are broken down into teaching units (unites d’enseignement, UE). Units are acquired and can be capitalised once the student has obtained the required average mark. The acquisition of teaching units and degrees is based on the principles of capitalisation and compensation used in the European credit system. Acquiring teaching units at university earns students the corresponding number of European credits (ECTS). Obtaining a degree means taking written and oral exams (through either regular testing or final exams) on the content of the teaching units making up each cycle. There are national rules organizing the students’ evaluation: The methods of measuring acquired knowledge and skills are defined in compliance with the measures set forth in the 1984 law by the president of the university, after consulting with the Council of studies and university life (CEVU). Knowledge testing procedures for master’s degrees are defined autonomously by the institutions, but they must appear in the accreditation application. Despite this national framework, universities still benefit from some autonomy. In this regard, the general inspection of national education and research administration (IGAENR) notices that the evaluation system was already complex and opaque before the LMD system was
implemented, but that this reform has increased this complexity, thus raising fears for growing inequalities between universities (IGAENR, 2005)

**Resources allocated per student and year.** The average cost per student varies dramatically depending on the degree. The average expenditure per student in preparatory classes for *Grandes Ecoles* (CPGE) is nearly twice that of a university student. Costs are also higher in the advanced technical courses (STS) which mostly attract technological and vocational baccalaureat holders.

**Chart 5. Average expenditure per student by course of study in 2006**

![Chart 5](image)


**Chart 6. Global higher education public expenditure by field in 2001 (in €/student)**

![Chart 6](image)

Source: After (Zuber, 2003).

### 3.2.2 Private funding

The private sector only contributes 16% of the funding of public universities, which is quite low in comparison with the OECD average. Its financial contribution is channelled through the “apprenticeship tax”: companies have to pay around 0.5% of their personnel expenditure to higher education institutions they select.
Rules for university-industry relations. Partnerships between universities and industry were traditionally weak in France, both because of the low commitment of universities in research activities and because of the complete absence of industry concerning public higher education funding and monitoring. The large PRO were thus the strategic actors of the science-industry relations. After WWII, the prevailing model for organizing the partnerships between public laboratories and private companies was that of large technological programmes (“grands programmes”) sponsored by the State. As argued by P. Larédo and others, (Papon, 1983, Laredo and Jolivet, 2002) the underlying rationale was that these programmes were risky long term ventures which could not be entrusted to market forces and which required State intervention, not only as a funder, but also as an initiator and a quasi first user. This model was based upon the promotion of both a national industrial “champion” and a large PRO. It was mainly applied to aeronautics (ONERA and Aerospatiale (Concorde and Airbus) and SNECMA), to electronics/computer (INRIA; Bull and ST Microelectronics), to space and Civil aeronautics (CNES, Arianespace and satellite producers), to telecommunications (CNET and Alcatel) and to Electronuclear.

These five programmes represented a massive instrument of the French public R&D policy and the most important channel of science-industry relations, with just under 50% of the total civilian budget in 1980 and around 40% for the whole decade of the 1980s. Apart from Space, this sort of public intervention has either disappeared (through privatisation: telecommunications) or has become marginal (information technology) (Laredo and Jolivet, 2002).

Apart from these programmes, science-industry relations progressively increased from the 1970s onwards. A National agency for the valorisation of research (ANVAR) was created at the beginning of the 1970s for all public research. All PRO as well as some universities set up valorisation and transfer offices in the 1980s. CNRS, for instance has multiplied by ten its contracts with industry between 1984 and 1994, with some 3,200 contracts signed with industry in 1996 (Mustar, 1998).

However, knowledge transfer is still considered as weak and inefficient by contrast to other countries. A report by Henri Guillaume (Guillaume, 1998), former head of the National agency for the valorisation of research, stressed the main reasons for the relative decoupling of scientific and economic activities in France in comparison with countries such as the United States and Japan:
- Segmentation between higher education and PRO, between PRO themselves, between the public and the private sector.
- Concentration of public R&D expenditures on a limited number of large firms at the detriment of small and medium enterprises
- Complexity and unreadability of the various instruments promoting technology transfer
- Low level of pre-venture and venture capital

This report had important repercussions in the national debate. It was followed in 1999 by a law on innovation and research which set up significant incentive measures for technological transfer, regarding:
- The involvement of researchers in the activity of innovative companies. The law enables research staff from PRO and from universities to participate as associates or managers in a new company, in the activity of a company or to provide scientific assistance and even participate in a board of directors or a board of supervision.
- The partnerships between companies, PRO and universities. All higher education and research institutions can create incubators with government support. They can also set up "industrial and commercial business services" which benefit from more flexible budgetary and account systems to manage their research contracts with companies or with other public sector bodies (SAIC or services d’activités industrielles et commerciales). These services also cover activities such as patent management, service provisions and editorial activities.
- The setting up of innovative companies: the law facilitated the creation of laboratory spin-offs while increasing public subsidies to public and private technological incubators (up to 50% of their expenses). The State also sponsors pre-venture funds (with a 30% advance capital).
- Tax assistance for industrial research. Research tax credits (CIR, for Credit d’Impôt Recherche) were set-up in 1983 to increase research effort by private companies. Large industrial groups as well as small and medium enterprises have benefited from it. The law on innovation increases incentives for companies employing young Doctorate holders.

Almost a decade after the law on innovation was adopted, the outcomes are still mitigated. A recent report (IGAENR-IGF, 2007) underlines that there has been so significant improvement in knowledge transfer, be it for partnerships between public research and companies (Chart 8), intellectual property, creation of laboratory spin-offs or researcher mobility. Research contracts between private firms and public laboratories are for instance still under the US or the European average level.

Chart 8. Share of research contracts with industry in the public expenditure for higher education and research.
Even the significant improvements in the patenting practices (Chart 10) of French public laboratories can be seen as an attempt to catch up with European standards (Chart 9).


![Chart 9](chart9.png)

*Source: MESR, 2006.*

Chart 10. Number of patent applications from public research (1994 to 2004).

![Chart 10](chart10.png)

*Source: INPI et OEB, traitements OST. (*) Donnée non disponible en 1994 pour les dépôts européens.*

There are some successful attempts to develop local synergies between private companies, higher education and research institutions. The most significant one is the creation of the so-called “pôles de compétitivité” or competitiveness clusters. The program was launched in 2004 and it was deeply inspired by Michael Porters’ definition of industrial clusters. Competitiveness clusters are officially defined, “for a given territory, as an association of companies, research centres and educational institutions working in partnership (under a common development strategy), to generate synergies in the execution of innovative projects in the interest of one or more given markets”. There are three kinds of competitiveness clusters, according to their technological orientation: in 2007 there were 7 global competitiveness clusters (involved in science-based industries), 10 globally-oriented competitiveness clusters (still involved in technological innovation but less committed to frontier research), and 54 other competitiveness clusters.
The first evaluations of this new policy instrument show that competitiveness clusters foster cooperation and local synergies and that they may have a positive impact on innovation. More specifically they give small and medium enterprises access to collaborations with large research institutions from which they were previously excluded. However they also create some windfall effects for public institutions or private companies which were already engaged in partnerships.

Conclusions

**Funding of research.** The gradual increase of project-based funding from the State, but even more from the EU and from regional authorities on the one hand, the development of large funding agencies on the other hand, are the major drivers for the watering down of French specificities and for the alignment with a European model of funding.

**Funding of higher education.** It remains mostly public, with the largest share coming from the state. There are significant differences between the non-selective and the selective curricula (not to say between universities and “grandes écoles” concerning the average cost by student). The funding policies also evolved from centralized and governed by bureaucratic rules to more decentralized, negotiated and based on performance assessments. However, as will be longer developed in the section 5 on monitoring, the market model has not strongly pervaded French higher education yet.

**University-industry relations.** Relations between public research and industry are still weak, even if recent reforms strengthen these links. These relations have been a constant concern of French governments: the 1980s have seen the “disappearance of the Colbertist state” characterized by centralism and direct steering (Mustar and Larédo, 2002). The State sponsored a small number of large companies and fostered their partnerships with the main PRO. This model of public intervention has been replaced since the 1990s by more decentralization and by “steering at a distance”. Since then, French reforms also foster the development of “horizontal” or lateral links and of territorial coordination between various stakeholders (higher education institutions, PRO, private companies, local and regional authorities…). In this regard these changes are to some extent inspired by theories of **network and multi-level governance** (co-production of public policies among numerous and equal actors; distinctive role of the State as a relationship facilitator) (Ferlie et al., 2008).
4 Recruitment

4.1 Faculty career tracks

80% of the French teaching staff and 75% of the research staff are employed on permanent (tenured) positions and are civil servant of the French state. Thus time limited contracts concern first of all doctoral and post-doctoral students.

Limited time contracts

○ Research positions (doctoral and postdoctoral positions)

French scientific training policy is a centralized one in comparison with countries such as the United States. In France, research training is traditionally understood as a state responsibility. Graduate support is mostly targeted to individual graduate students and not to the university or to the established researcher (e.g. through research assistantships supported through grants) (Gaughan and Robin, 2004). The main source of funding for PhD students is the French Ministry of research. At the end of the 1980s, there has been a strong political will to increase the number of these grants: since then, about a third of the PhD completed each year benefit from ministerial grants. The Ministry also funds training programs for PhD in the private sector, the most widespread between the CIFRE program (Industrial Convention of Training through Research).

Table 3. Types and sources of graduate support in France (2001-2002)

<table>
<thead>
<tr>
<th></th>
<th>Grants provided by the French ministry</th>
<th>CIFRE programs</th>
<th>Total of graduate support</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural sciences (except life sciences)</td>
<td>1 837</td>
<td>550</td>
<td>5 115</td>
<td>6 130</td>
</tr>
<tr>
<td>% of graduate support</td>
<td>36%</td>
<td>1%</td>
<td>83%</td>
<td>100%</td>
</tr>
<tr>
<td>% of all students</td>
<td>30%</td>
<td>9%</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Life sciences</td>
<td>816</td>
<td>112</td>
<td>1 994</td>
<td>2 824</td>
</tr>
<tr>
<td>% of financial support</td>
<td>41%</td>
<td>6%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>% of all students</td>
<td>29%</td>
<td>4%</td>
<td>71%</td>
<td>100%</td>
</tr>
<tr>
<td>Humanities and social sciences</td>
<td>1 202</td>
<td>105</td>
<td>2 068</td>
<td>9 381</td>
</tr>
<tr>
<td>% of financial support</td>
<td>58%</td>
<td>5%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>% of all students</td>
<td>13%</td>
<td>1%</td>
<td>22%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>3 856</td>
<td>767</td>
<td>9 181</td>
<td>18 335</td>
</tr>
<tr>
<td>% of financial support</td>
<td>42%</td>
<td>8%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>% of all students</td>
<td>21%</td>
<td>4%</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

The notion of “postdoctoral contract” appears in the 1990s in French research institutions. Until the 1980s, young doctorate holders who did not get a tenured position as a university lecturer or as a researcher either worked as temporary teaching staff (ATER, see below) or leaved the academic system, as public laboratories did not get a lot of project-based funding to hire them. In the 1990s, these doctorate holders get more numerous (as a result of the
increased number of grants available to doctoral students) and they start to work as “postdoctoral researchers” employed by French public laboratories or abroad. This evolution raises strong concern among the French scientific community who was afraid of the creation of this waiting list of doctorate holders “knocking on Academia’s door” (Robin and Cahuzac, 2003). However, postdoctoral positions have now become the rule at least in the natural sciences.

Table 4. Proportion of French young doctorate holders (PhD defence in 2001) and who were employed on at least one postdoctoral contract between 2001 and 2004.

<table>
<thead>
<tr>
<th>Field</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maths and physics</td>
<td>51</td>
</tr>
<tr>
<td>Engineering sciences</td>
<td>19</td>
</tr>
<tr>
<td>Chemistry</td>
<td>59</td>
</tr>
<tr>
<td>Earth and life sciences</td>
<td>47</td>
</tr>
<tr>
<td>Law, economics and management</td>
<td>7</td>
</tr>
<tr>
<td>Humanities and social sciences</td>
<td>9</td>
</tr>
<tr>
<td><strong>ensemble</strong></td>
<td><strong>31</strong></td>
</tr>
</tbody>
</table>

*Source: (Giret, 2006)*

- **Teaching positions**

Universities can also employ teaching staff on short-term positions to face temporary growth of student enrollment or, more often, when in times of budgetary restrictions for tenured positions. Most of these positions (ATER or attaché temporaire d’enseignement et de recherche) are accessible to doctoral students who will soon complete their PhD or to young doctorate holders. Since the 1980s, there have been recurrent political actions to reduce the amount of such short-term positions.

In the long-term, they have led to a stabilisation (around 20%) rather than to a decrease in this proportion, with strong variations between disciplines (Chart 12).

However, the **law on autonomy** allows university presidents to recruit directly administrative, research and teaching staff on short-term contracts. One should then expect the proportion of non-tenured university staff to increase in the coming years.

Chart 11. Teaching staff employed on short-term contracts since 1999 (in thousands)
Tenured positions

There were less than 70,000 permanent teaching and research staff in 2002, with university staff representing more than two thirds of it (Chart 13).

Table 5. Permanent teaching and research staff according to institution and disciplines (december 2002)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Teaching or research staff</th>
<th>Discipline</th>
<th>Teaching and research staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher education</td>
<td>49,450</td>
<td>Maths</td>
<td>3,630</td>
</tr>
<tr>
<td>CNRS</td>
<td>11,575</td>
<td>Physics</td>
<td>4,314</td>
</tr>
<tr>
<td>Inserm</td>
<td>2,119</td>
<td>Chemistry</td>
<td>4,931</td>
</tr>
<tr>
<td>Inra</td>
<td>17,83</td>
<td>Engineering sciences</td>
<td>3,558</td>
</tr>
<tr>
<td>Inria</td>
<td>736</td>
<td>TIC</td>
<td>6,845</td>
</tr>
<tr>
<td>Inrets</td>
<td>415</td>
<td>Life sciences</td>
<td>2,800</td>
</tr>
<tr>
<td>Cemagref</td>
<td>79</td>
<td>Medical sciences</td>
<td>6,801</td>
</tr>
<tr>
<td>Ined</td>
<td>49</td>
<td>Social sciences</td>
<td>8,941</td>
</tr>
<tr>
<td>Lcpc</td>
<td>119</td>
<td>Humanities</td>
<td>12,545</td>
</tr>
<tr>
<td>Total</td>
<td>66,481</td>
<td>total</td>
<td>66,481</td>
</tr>
</tbody>
</table>

Source: (OST, 2003)

Chart 13. Repartition of permanent teaching and research staff between higher education and public research organisations

Source: (OST, 2003)
Permanent research and teaching staff positions are opened by the minister, according to budgetary decisions of the parliament. Thus the budgetary constraints at the national level are quite strong, leading to many “up and downs” in the number of position openings since the 1970s. Recruitments were particularly massive in the 1960s and in the 1970s, especially that of teaching staff in order to face the first massification wave of higher education. As a consequence, the proportion of university lecturers and researchers who is expected to retire between 2006 and 2015 is extremely high: 43% of the research staff and 35% of the teaching staff (Schwartz, 2008). The current recruitment policy appears to be a rigorous one as the government does not intend to renew the all research and teaching staff. In addition, as already mentioned above, the new recruitment possibilities offered by the law on autonomy to university presidents show a trend to develop non-tenured positions a the detriment of tenured ones.

Chart 14. Average age of permanent research and teaching staff

The allocation by the ministry of higher education of permanent teaching positions (first positions as maîtres de conferences, senior positions as full professor) to universities follows a three-stage process: First, departments express their demands for positions at the university level. Then universities arbitrate between those demands (see below) and they elaborate a short-list of demands. Finally university presidents negotiate position openings for their university with the ministry.

The allocation of permanent research positions (first positions as chargés de recherche, senior positions as directeurs de recherche) to PRO is based on two negotiations: firstly with between the ministry and the head of the PRO; then between the latter and the PRO is composed of. Most research positions only specify the scientific subfield of the newly recruited researcher but the candidate chooses the laboratory in which she wants to work. However, there is a growing amount of so-called “signposted” positions which designate the precise subject in which the research has to be performed.

Salaries and work conditions are fixed by bureaucratic rules. Salaries are comparable for research and teaching positions. The law on autonomy adopted in 2007 allows university presidents to modulate the faculty salaries, to introduce performance-related extra-salaries and to hire academic staff at higher salaries.

Staff employed on permanent research position has no teaching duties. All university lecturers (maîtres de conferences and full professors) have a teaching duty of 192 hours per year. They
have to devote half of their working time to research even though there is periodic assessment of their research activities (see below section on monitoring). Here again, some recent changes have brought more flexible rules and increased the decision power of university presidents. Under the decree adopted in April 2009, the university president (or the head of the higher education institution) can modulate the teaching duties of university academics, notably with regards to their research activities as evaluated by the CNU. In the first versions of the decree, this decision could be imposed on university academics. The strong mobilization among the scientific community has let the government to modify this project so that teaching duties can now only be modulated with their agreement. However, the decree also states that the determination of teaching duties must always stay compatible with the university’s training obligations (as stated in the four-year contracts with the State): there is thus a fear that, in a context where the number of position openings will increase rather slowly, some university academics will have no choice but taking on more teaching duties.

4.2 Selection and promotion

French academics get an early access to permanent or tenured positions: on average they are 33 years old when they get their first position as “tenured university lecturer” (maître de conférences), varying from 30 (in the natural sciences) to 36 (in the humanities). The same holds true for permanent research positions. On average access to full professorship occurs at the age of 43 (Schwartz, 2008). 85% of the teaching staff recruited as full professor was previously a tenured university lecturer. Some French academics spend their whole career as maîtres de conferences (Chart 15). However, when looking at the laboratory level, one should notice that the share of senior staff (full professors as well as senior research researchers) is significantly higher in France than in other European countries (Larédó, 2001). This can be explained by both relatively high promotion rates to senior positions and by the limited number of non-tenured positions in comparison with other countries.

Chart 15. Repartition of permanent teaching staff between maîtres de conferences (MCF) and professors (PR).

![Chart 15](image_url)

Source: (Schwartz, 2008)
Standard procedures for recruiting maîtres de conférences and full professors are quite similar. They are based on national competition and they follow a two-stage process (national “qualification” followed by applications for posts opened in each university) which is described in the table below.

There are also two specific procedures for the recruitment of full professors. Among the positions opened in each university, a few are held for internal promotion only. This procedure aims at promoting maîtres de conferences who have shown a high loyalty toward their university (Gouldner, 1957) and high dedication to administrative and pedagogic tasks. These university lecturers have usually given up research activities so that they would not meet the criteria of the standard promotion procedure.

Table 6. A single procedure for the recruitment of maîtres de conferences

<table>
<thead>
<tr>
<th>Requirements</th>
<th>National competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>- A PhD</td>
<td></td>
</tr>
<tr>
<td>- no formal mobility requirement “local recruitment” of former PhD students : 1/3</td>
<td></td>
</tr>
<tr>
<td>A two-stage process</td>
<td></td>
</tr>
<tr>
<td>1. National qualification for the function of maître de conferences by the national university board: Conseil National des Universités (CNU) Peer review process</td>
<td></td>
</tr>
<tr>
<td>2. Applications for posts open in each university. Peer-review examination by a local commission: Commission de spécialistes (= &gt; selection committee since the law on autonomy)</td>
<td></td>
</tr>
<tr>
<td>- CV</td>
<td></td>
</tr>
<tr>
<td>- Interview</td>
<td></td>
</tr>
</tbody>
</table>

Table 7. Three procedures for the recruitment of full professors

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Standard procedure</th>
<th>Specific procedure</th>
<th>Specific procedure for four disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>- HdR (habilitation à diriger des recherches)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- no formal mobility requirement: “local promotion” of former maîtres de conferences within the same university : 1/2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. national university board: Conseil National des Universités (CNU) National qualification for the function of full professor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Applications for posts open in each university. Peer-review examination by a local commission: Commission de spécialistes (= &gt; selection committee since the law on autonomy)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- HdR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 10 years spent in higher education and research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- PhD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A two-stage process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National competition (agrégation du supérieur)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The possibility for French university lecturers to spend their whole career in the same university (as a PhD Student, a maître de conférences, a full professor) is increasingly criticized (risk of clientelism, stagnation of the scientific community...).

However, some scholars notice that the localism of recruitments and promotions is more decried than precisely measured (Godechot and Louvet, 2008). Most measures simply check whether the academics are promoted in the same institution where they were recruited as maîtres de conferences and they to not take into account post-doctoral mobility. Between 2002 and 2007, 30% of MCF (assistant professors) are recruited in the institution where they defended their thesis. 57.7% of new professors already held a job as assistant professor in the same institution. Godechot and Louvet (ibid.) define as “local” academics university lecturers who supervise their first PhD thesis in the same higher education institution where they defended their own thesis. With this measure, the proportion of “locals” among recruits is still high and is situated around 55% from the 1970s to the 1990s.

Moreover, although one should bear in mind that the possibility for PhD holders to be recruited as tenured lecturers in the same university is not so common abroad, one should not overestimate French specificities regarding the promotion as full professor, as underlined by C. Musselin (Musselin, 2005a). First, the best French universities do not promote their own maîtres de conferences as full professors but they attract scientific “stars” from French universities and from abroad. Secondly, foreign universities (e.g. American universities) do not prohibit internal promotions (and internal labour markets for Academics), by contrast to some widespread ideas in the French public opinion.

Criticism has led to the establishment of informal rules that counter localism. Some universities and PRO informally prohibit internal recruitments or promotions. With regards to universities, this new policy generates a decrease in the tendency toward localism in the 1990s (Godechot and Louvet, op. Cit.), that confirms the most recent data (see above). At the CNRS, the percentage of junior researchers recruited outside of their doctoral laboratory went from 65 to 75% between 2001 and 2004. The law on autonomy also specifies that universities have to indicate in their contract with the State a target proportion of external recruitments and promotions.

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7 The same holds true for research staff, see below.
8 Source: Minister of Higher Education
9 Source: CNRS, Follow up of the recruitment policy of CNRS researchers.
Finally the law on autonomy replaces the local commissions (*commissions de spécialistes*) by **selection committees** (*comités de selection*) and modifies their composition.

* The former *commissions de spécialistes* were peer elected for four years. The new ones are *ad hoc* committees will be named by the governing board of the university. The president gets increased powers: he presents a list of names to the academic council which then advises the governing board.

* The new selection committees are made up of 8 to 16 members (whereas the commissions de spécialistes were made up of app. 30 members). The share of members who do not belong to the university which recruits the new staff is increased up to half (being or not academics). These “external members” are still academics coming from French as well as from foreign universities.

**Conclusions**

French Academics are traditionally strongly committed towards their profession and far less committed toward the higher education and research institutions. As argued by C. Musselin, French universities have for a long time worked first of all as shelters for French academics (Ferlie et al., 2008). This feature can be explained by the lack of institutional autonomy which universities suffered from as well as by the long-standing power of faculty staff and departments within universities.

There has been some gradual change since the 1980s: higher education and research institutions have in deed increased their career management prerogatives at the detriment of the academic profession (Pigeyre and Valette, 2004). Academic careers are still mostly governed by professional rules (importance of peer-review evaluations of publication scores); nevertheless academics also have to meet institutional objectives and priorities. The management of academic careers remains “officially” undifferentiated (as the official descriptions of the positions do not specify if they are more oriented toward research or teaching): however institutions try to recruit and to promote two types of academic profiles (Musselin, 2005b, Louvel and Valette, 2008). They first need **professional researchers** who are the archetype of the scientific leader: a large number of publications and of PhD students; management of scientific activities (team management; international research contracts; coordination of large scientific networks, etc.); mobility. They also need **local entrepreneurs** who can be defined as academics who are involved in both educational and scientific management and do not attain the level of scientific excellence of professional researchers. Local entrepreneurs are strongly involved in the smooth functioning of their institution and they are not necessarily mobile. They are usually promoted within the same department.

The law on autonomy will reinforce the role of higher education institutions in the management of academic careers and more precisely that of the university president as he will be able to modulate faculty salaries and teaching duties, and to recruit directly administrative and teaching staff (on short-term or long-term contracts).
5 Monitoring

5.1 Field level

5.1.1 Monitoring accounts

As already mentioned in the previous section, there has been since the 1980s a general evolution toward the negotiation and co-construction of policies and rules between the Ministry and the Universities. These negotiations have replaced more authoritarian and prescriptive procedures where the ministry designed national rules and controlled their implementation (Berrivin and Musselin, 1996). More precisely, the contractualization policy increased the institutional autonomy of the universities at the expense of the individual freedom of faculty staff. It also gave universities more autonomy to use its financial resources.

The recent introduction of new budgetary procedures (see below: the enactment of the LOLF in higher education) changed the principles for monitoring accounts. The introduction of performance-based management was strongly influenced by New Public Management ideas. It was also perceived as a way for French universities to keep pace with international standards and to improve their efficiency, attractiveness and visibility (and consequently their position in international rankings).

The 2007 law on autonomy (LRU) increases the institutional autonomy of universities which enables the “steering at a distance” of higher education: reinforcement of the executive leadership of universities (see below), more freedom to manage budgets and human resources (as shown in other sections), transfer of ownership of real estate (for those universities who want to).

5.1.2 Monitoring quality of education

Since 1984 universities have been evaluated by a national evaluation committee (CNE or “Comité national d'évaluation des établissements publics à caractère scientifique, culturel et professionnel”\(^{10}\)). Its attributions are broader than the evaluation of universities as it evaluates all research, cultural and vocational public institutions.

Since 1989 the CNE has been an autonomous administrative entity which reports directly to the President of the Republic and thus is not under the authority of the Higher Education Minister. The CNE is financed by the state and has its own budget. The CNE consists of a 25 member board and of a 24-strong administrative staff led by a general delegate. The members are named by the President of the Republic during a ministers’ meeting. They are selected from lists of names respectively put forward by the main higher education and research institutions or by central administration such as the State Council or the State Audit Office.

The CNE evaluates the institutions in the areas linked to the missions of the higher education public sector, i.e. initial and further education, students living conditions, research and the use of its results. The CNE also examines the way an institution is governed, its policy and management. However, the CNE is neither entitled to evaluate individuals, nor to authorize courses, nor to apportion state funds. The CNE develops a dialogue-based reflection on its methodology, in particular with the University Presidents’ Conference. Its evaluation leads to conclusions and recommendations.

\(^{10}\) A detailed presentation in English is available on the CNE website http://www.cne-evaluation.fr/versions/anglais.htm
In 2007 the CNE was merged into the newly created evaluation agency for research and Higher Education (AERES). This agency is also an administrative body, led by a council of 25 members nominated by decree: there are members from the private and public research sectors, from universities, from other evaluation structures, and two members of the parliament. The evaluations are done by committees composed of experts in the scientific field.

The AERES has broader prerogatives than the CNE. It is organized into three sections which are in charge of higher education and research institutions (mostly universities, PRO and the National Agency for Research), public laboratories (which are mostly mixed research units as explained in the first section) and their staff, content of curricula and degrees. The LRU specifies that evaluations by the AERES will have a direct impact on the budget allocation to universities, by contrast to former evaluations by the CNE which did not have any impact on public funding.

5.1.3 Monitoring of research

French public research is placed under the aegis of a central administration (Direction Générale pour la Recherche et pour l'Innovation – DGRI, created in 2006) belonging to the Ministry for higher education and research. The director of the DGRI is also in charge of the interministerial coordination of research: he is also in charge of an interministerial mission for higher education and research (MIRE – Mission interministérielle pour la Recherche et l’Enseignement Supérieur). The DRI is the regulatory body for all public research organizations as well as for the research agencies (such as the National Agency for Research). It also defines the strategic orientations and the national priorities for research.

Before the creation of the evaluation agency for research and Higher Education (AERES), monitoring of research was strongly fragmented.
- Mixed research units are evaluated by scientific committees from the PRO they are associated with. For example, CNRS laboratories are assessed by a National Committee (Comité National) which is made up of elected and appointed members (from the scientific and economic community and from abroad). Evaluations are mostly based on peer reviews but they also take into account how the labs projects fit into the global strategy of the CNRS, as well as the quality of the internal management…
- University laboratories which are not affiliated to any PRO and other federative structures for research are evaluated by an administrative body under the authority of the Minister for Higher Education and research (“Mission Scientifique Technique et Pédagogique”).
- Research performance of higher education and research institutions is assessed by national evaluation committees (such as the CNE mentioned above, the national Committee for Research Assessment (CNER). Assessment procedures also take place when the four-year contracts between the state and these institutions are renegotiated.
- Finally, research staff is periodically evaluated by the scientific committee of the PRO it belongs to (which the same committee as the one which evaluates the mixed research units). University staff is not periodically evaluated (see above). Assessment only occurs when applying for promotion.

The French government created the AERES in order to reunify this fragmented picture and to be able to get an overview of the performance of French research. However, such an evaluation agency with almost “universal” prerogatives appears quite unique in the
international context, so that some observers interpret it as a resurgence of French well-known tendencies to Jacobinism (Méla, 2008)…

5.1.4 Use of metrics (rankings, performance indicators) and links to funding

The LOLF lists performance indicators for higher education and research which are quite similar to the ones which can be found in international rankings (Vinokur, 2008): number of patents, number of publications, honor awards, number of foreign students and of foreign researchers, participation to EU sponsored programs, quality of student placement, minimum size of higher education curricula, share of private funding, share of own resources, etc.

This law links State funding with performance indicators (Cytermann, 2007) which introduce competition and differentiation between universities with regard to:
- Their international attractiveness measured by the proportion of foreign students and foreign teachers
- The university-industry partnerships for higher education and research
- The share of non-state funding and the diversity of their own resources (life-long learning, patents, service and research contracts…).

However, market influences remain limited. State funding remains predominant in the first place: the laws targets that universities’ own resources should reach 8% of their global revenues in 2007 (including salaries). Moreover, participation of family funding is not stimulated as student fees are still determined by the Ministry and as they remain quite low.

Therefore, as argued by A. Vinokur (ibid.), the new policy only fosters partial and limited competition between universities at the national as well as at the international levels, as some instruments are still missing: no accreditation procedures of university curricula through independent agencies; non-selectivity of public universities (whereas the attractiveness of many foreign universities relies on their selectivity); imbalance between the large rise in costs on the one hand and the limited increase in resources on the other hand (as French universities can not, like foreign universities, increase tuition fees in order to finance the expenses raised their attractiveness policy).

There are still some uncertainties regarding which evaluation criteria and guidelines which will lead the evaluations by the AERES. More specifically the balance between evaluation based on quantitative performance indicators (close to the British Research Excellence Framework) and evaluation based on peer review (close to the previous Research Assessment Exercise) is still unclear (Méla, 2008).

Regarding the evaluation of the quality of research, the increase use of bibliometric indicators (by scientific committees belonging to the PRO as well as by the AERES) raises strong controversies among researchers from the social sciences and the humanities but also among researchers from the natural sciences (SocietedesNeurosciences, 2006).
5.2 Organizational level

5.2.1 Governing bodies

French universities have three deliberative bodies which are made up of elected professors, members of the administrative staff, students. The governing board is also made up of external personalities (see Chart 16).

The **governing board** is the ministry interlocutor regarding budget decisions, demands for employment positions, etc.. It determines the general policy of the university; it votes the budget, approves the accounts, as well as all agreements and conventions signed by the university president.

The **Board of Studies** (Conseil des Études et de la Vie Universitaire - CEVU) and the **Academic Council** (Conseil Scientifique - CS) deliberate on issues that then have to be submitted to the Governing Board. The Board of studies proposes guidelines on initial and further education, and student living conditions. The academic council proposes guidelines for research policy. It is also consulted by the governing board on curricula, research orientations, and changes in the university diplomas.

The university president presides over councils, orders expenditure and income, and has authority over all the staff. As it will be explained below, the law on autonomy develops his managerial role within the university.

Teaching and research departments (UFR) are led by a Dean, who is a faculty staff chosen by the faculty council (conseil d’UFR). The Faculty Council consists of representatives of teaching, research and administrative staff, and external personalities. Its main attribution is the definition of the teaching curricula.

As explained by C. Musselin, the three governing bodies of the universities had a **poor reputation in the 1980s** (Musselin, 2004). These plethoric boards usually came to no decisions and they refused to rank by priority the departments’ requests for budgets and permanent teaching positions. Consequently they let the ministry decide and arbitrate between rival projects issued by the departments.

The boards already **increased their decisional ability in the 1990s**: the Academic Council (CS) and the Board of Studies (CEVU) developed their evaluations or ranking on projects presented by academics. The Governing Board started to establish priority rankings on demands for budget and positions.

**The law on autonomy extends the attributions of the governing board.** As mentioned above, it improves the financial autonomy of universities. The governing board will have to spend the “global budget” attributed by the Ministry between operational budgets, staff recruitments, increased salaries…

**The law also modifies its composition.** It raises the number of representatives from the business world and from local governments, who are directly named by the president. At the same time, it reduces the size of the board from 20 to 30 members, thus reducing the share of the members elected by the university staff and by students. There will be 7 or 8 external members, that is ¼ to 1/3.
5.2.2 University leaders: selection and role in the university government

The presidential function was created from scratch by Faure law adopted in 1968. This law got rid of the old faculties and favoured the creation of multidisciplinary universities led by an elected president, always an academic (Musselin). The presidential function evolved gradually in the 1980s, however the presidents hardly emerged as managers whereas the faculty deans remained powerful.

During the 1990s there was a general trend toward a more active leadership at the presidential level. The presidential function became a “full time job”; vice-presidents also became the leading administrators of the university (ibid.).

Presidents claimed recently more autonomy for universities. The University Presidents' Conference strongly supported the adoption of the law on autonomy which increases the presidents’ attributions. On the contrary, university staff and students opposed the law as they feared a “presidentialization” of the university. In fact,

- The president will name the external personalities of the governing board (representatives of the business world and of the local government) who make of ¼ to 1/3 of it.
- He/she will be elected by the governing board only (and not by the three deliberative bodies). He/she doesn’t have to be an academic any longer.
- He will deliver an annual report to the governing board but there will be no “impeachment procedure” in case of the boards’ disagreement.

Chart 16. Evolutions at the organizational level introduced by the Law on autonomy (2007)
Governing Board (CA)

-30 to 60 members
-40 to 45% of teaching and research staff
-20 to 30% of external personalities
-10 to 15% of administrative staff
-20 to 25% of students

-20 to 30 members
-40 to 46% of teaching and research staff
-27 to 35% of external personalities (named by the president)
-10 to 15% of administrative staff
-15 to 16% of students

- can now create, merge, or disband teaching and research departments
- can now spend a “global budget”

University President

- elected for 5 years by the three governing bodies
- has to be an academic
- has executive power but controlled by the governing board

President elected by the three governing bodies

President elected by the governing board only

Academic council (CS)

-20 to 40 members
-60 to 80% of university staff (minimum half of teaching and research staff)
-10 to 15% of PhD students
-10 to 30% of external personalities

Research orientations proposals to the governing board

Are just “consulted” by the governing board

Curricula reforms proposals to the governing board

Board of studies (CEVU)

-20 to 40 members
-75 to 80% of teaching and research staff and students
-10 to 15% of administrative staff
-10 to 15% of external personalities

Until 2007

Law on autonomy
5.2.3 Student involvement

*Procedures for monitoring education (formal influence of students, evaluations, etc).* There was until the LMD reform no legislative framework to organize curricula’s evaluation by students. Such procedures start to be implemented in some universities.

**The occurrence of student protests.** Higher education is a highly sensitive issue in France and student protests are a strong and long-standing tradition. Students recently protested against the law on autonomy (2007) and also against reforms aiming at introducing more flexibility for youth employment (protests against the “first job contract” – *Contrat Première Embauche* (CPE) in 2006). For the last two last decades, students have been defending the “French model” of higher education (based on a fair and equal treatment of all students, on the non-selective enrolment of university students, on the exclusive funding of higher education by public institutions, etc.) and they have been denouncing what they considered as attempts to introduce the “Anglo-Saxon” model of higher education more or less let to market forces (private funding, concurrency between universities, generalized selection to get into the first year program, high student fees…). Some protests were successful: for instance student fees remain very low compared to other countries, and entrance into the first year of university is still non-selective, partly because of the strength of student protests against the law on autonomy.

**Conclusions**

French higher education system has traditionally been characterized as a highly centralized system with strong State intervention and control on higher education institutions regarding central issues such as staff recruitment and status, the organization of teaching curricula, budget allocation, etc. However, two main arguments call for a more complex understanding of the monitoring of universities at the field level.

First, as argued by Ferlie and colleagues (Ferlie et al., 2008), this traditional view simplifies the relationships between the French State and the academic profession. It underestimates the fact that the State acknowledged professional regulation (e.g. for recruitments, careers and evaluation of academic work) and also that academic found room for manoeuvre (to preserve faculty control over key work practices or to defend their own interests). Consequently, French higher education was rather co-managed by the State and by representatives of the profession than strongly monitored by the State. The State had stronger links with the profession than with Universities being weak institutions benefiting from little autonomy.

Secondly, as argued by Musselin (Musselin, 2004) and others, this traditional view does not account for the major changes which have occurred since the 1990s: the emergence of French universities as autonomous and responsible institutions; the transformations of modes of actions by the ministry towards more negotiations and contractual relationships.

Finally, a new legislative framework tries to reconcile French universities with the entrepreneurial model (Clark, 2001), in which universities are autonomous institutions. Partly inspired by NPM ideas, it increases market influences and imports management tools from the business world (such as performance-based objectives, competition, and competitive clusters). It also increases the managerial role of university presidents. Similarities with the entrepreneurial model remain limited (as market-like mechanisms are still underdeveloped in
comparison with other countries); however the executive leadership attributed to university presidents could represent a disruptive change for the governance of higher education at the organization level.
6 Conclusions

Provide conclusions for the whole report.
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