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Osservatorio per la valutazione del sistema universitario

University Funding Mechanisms and related issues

Rapporto finale del gruppo di ricerca

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L'Osservatorio ha individuato il tema da approfondire, ha definito il programma di ricerca e ne ha affidato lo svolgimento al gruppo di ricerca. La responsabilità del contenuto del presente rapporto è degli autori.

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Contents

page

1. Introduction	5
2. Denmark	
2.1 System characteristics	7
2.2 The budget of the institutions	8
2.3 Funding mechanism	10
2.4 University income from other activities	15
2.5 Issues indirectly related to funding	15
3. Flanders	
3.1 System characteristics	19
3.2 The budget of the institutions	20
3.3 Funding mechanism	21
3.4 University income from other activities	25
3.5 Issues indirectly related to funding	25
4. France	
4.1 System characteristics	29
4.2 The budget of the institutions	31
4.3 Funding mechanism	31
4.4 University income from other activities	36
4.5 Issues indirectly related to funding	38
5. Germany	
5.1 System characteristics	43
5.2 The budget of the institutions	45
5.3 Funding mechanism	46
5.4 University income from other activities	50
5.5 Issues indirectly related to funding	52
6. The Netherlands	57
6.1 System characteristics	57
6.2 The budget of the institutions	58
6.3 Funding mechanism	60
6.4 University income from other activities	67
6.5 Issues indirectly related to funding	68
7. Portugal	73
7.1 System characteristics	73
7.2 The budget of the institutions	74
7.3 Funding mechanism	74
7.4 University income from other activities	80
7.5 Issues indirectly related to funding	81

8. Sweden	85
8.1 System characteristics	85
8.2 The budget of the institutions	87
8.3 Funding mechanism	88
8.4 University income from other activities	93
8.5 Issues indirectly related to funding	94
9. The United Kingdom	97
9.1 System characteristics	97
9.2 The budget of the institutions	98
9.3 Funding mechanism	99
9.4 University income from other activities	107
9.5 Issues indirectly related to funding	110
10. Comparative overview	115
10.1 Public funding of universities	115
10.2 University income from other activities	118
10.3 Organisation and funding of medical training	119
10.4 Staff issues	120
10.5 Student related issues	121
10.6 Quality assessment	122
References	123

1. Introduction

This report presents the results of a research project on the funding of universities in Western Europe. In the perspective of governmental budgets, the funding of higher education is a matter of ongoing concern. The massification of higher education has resulted in substantial increases in the level of public funds directed to higher education institutions during the past decades. In particular during the 1980s and the early 1990s, governments sought for ways of making higher education more efficient in order to stop the continuous growth of the higher education budget. In many countries, this has led to a situation in which higher education institutions have become more dependent on private sources for their funding. In other countries, the orientation of the funding mechanism changed from an input based system towards a more output-oriented way of funding. As a consequence of these developments, and probably encouraged by the growing internationalisation and globalisation, much interest has emerged, particularly since the early 1990s, in looking abroad for new perspectives on the organisation of higher education funding and on solving budgetary problems.

Accordingly, this report provides general descriptions of the funding structure and, in particular, the specific funding formulae currently in use for the funding of universities in a limited number of Western European countries. The research underlying this report was commissioned by the Italian National University Evaluation Council (NUEC). NUEC has been asked by the Italian Minister responsible for university education to provide a proposal for a new university funding method in Italy. The proposal for a new funding mechanism should take into account the current “state of the art” of university funding in Europe. To support the work of NUEC, this report was written. The analysis of higher education funding in Europe, which is presented here is restricted to the funding of universities in eight countries: Denmark, Flanders (Belgium), France, Germany, the Netherlands, Portugal, Sweden, and the United Kingdom.

Our aim is to provide detailed insight into the funding structure of universities and some related aspects. For a valid interpretation of the comparative information on the funding of universities, some insight is needed into the systems of higher education of the countries included in this study. Therefore, for each country, first a brief description of the general characteristics of the higher education systems will be given as well as the relative position the university sector has in this system. Issues that will be addressed are: the types of institutions, programmes, degrees conferred and enrolment. Then, some information about the public budget available for university education and the budget of the institutions will be shortly addressed as far as information is available.

Next, we come to the core theme of this study, namely the *funding mechanism* for allocating public funds to the universities. For each of the countries involved in the study, the methods employed by the respective authorities (governmental authorities, funding councils and research councils) will be described in detail. Among other things, the following items will be addressed: the (possible) *separate allocation* of teaching funds and research funds, the *funding formula* applied, and the *orientation* of the funding method. By the latter we mean whether the method is incremental in nature, or based on negotiations, or whether it is input-oriented, throughput-

oriented or output- (i.e. performance) oriented. Other issues relate to funds allocated for specific purposes, like investments or research (e.g. funds administered by research councils). Particular attention will be paid to the question whether differences between disciplines (i.e. academic subject groups) are translated into different levels of grants allocated institutions, e.g. by using different tariffs per student across disciplines. Where possible, recent developments and future plans concerning the funding of universities will be addressed.

In addition to the description of the public funding for universities, a number of aspects related to funding will be discussed. First of all, additional information will be presented on the sources of funding of universities, particularly from activities like contract teaching, contract research and consultancy (often organised in university-affiliated companies or research groups) and the treatment of patients in academic hospitals. In addition, some *staff* issues that have an impact on the flexibility of the funding and the level of expenditure of universities will be addressed. Issues referred to concern the numbers of academic staff and non-academic staff, full-time and part-time staff, the relative share of academic staff that holds tenured positions, and the distribution of time devoted to, respectively teaching and research. Furthermore, some student related issues will be addressed, concerning access (selection), tuition fees, student support and the relationship between choices of students and the financial resources of universities. Finally, the national systems of quality assurance will be briefly addressed. Particular attention will be paid to the implications of the outcomes of quality assessment on the funding of universities, as well as to the students' voice in the quality assurance procedures.

Structure of the report

For reasons of convenience, the analysis is presented on a country by country basis. This means that in chapters 2 through 9 the eight countries will be discussed separately. For each country, information will be presented on the items mentioned above, as far as data were made available to us. At the end of the report, chapter 10 will provide a short comparative overview of the information presented.

2. Denmark

2.1 System characteristics

Denmark has around 110 higher education institutions, ranging from universities to smaller professional schools. The main difference between the two types of institutions is that in the universities research and education are closely integrated, whereas the professional education schools prepare students for professions that require specific practical skills. These schools therefore mainly receive funding for teaching, whereas universities receive funding for both teaching and research.

There are 11 universities in Denmark: the 5 classical ones, 3 business schools, the technical university, a university for agricultural studies, and a pharmaceutical university. Despite their different areas of specialisation, they all have the same legal status and are governed by the same University Act (of 27 May 1993). In addition, all the universities are public institutions and are funded by the state.

The universities offer 5-year master's (*kandidat*), postgraduate training, and (from 1988 onwards) 3-year bachelor programmes. The non-university sector consists of colleges (about 90 relatively small institutions offering medium level programmes) and vocational schools (offering short-level programmes). The latter offer programmes in technical subjects, teacher training, social work and physiotherapy, etc. Only the university sector has a task in research and post-graduate education (the latter leading to either the *licentiat* or the PhD degree).

All in all there are three types of undergraduate education: short-cycle, medium cycle and long cycle. Short-cycle programmes (1-2 years) are primarily offered by the vocational schools. Medium cycle programmes (3-4 years) by universities and colleges and long-cycle programmes (4-6 years) only by the universities. Apart from these, there is postgraduate research training. Combining all types of higher education the total number of students in full-time equivalents (fte) is about 122,000. The five universities have some 45,000 students (fte). The number of students in long-cycle programmes is about 90,000 persons (note: this is not in fte!). Most of them (> 80%) study full-time. For medium-cycle programmes the number is somewhere below 50,000 (with more than 90% studying full-time), while short-cycle programmes have only about 10,000 students.

In Denmark there still exists a situation of entrance limits (*numerus clausus*). Since 1977 the government operates a central system of entrance regulation, limiting the number of student places. Nowadays, student places, after negotiations with the government, are only set for institutions as a whole, not by discipline. The exception is programmes in medical science and teacher training. Although the number of places in higher education has increased during the last decade, there is annually a large number of applicants who are refused admission for capacity

reasons. The option for students to leave the university upon receiving (after three years of study) their Bachelor's degree is still not very popular with students. Most of them go on studying.

Traditionally, Danish higher education was regulated strongly by the state. Since the 1980's the government is increasing the institutions' autonomy in areas of setting up programmes, financial affairs and access policy. This development went along with a strengthening of institutional management (i.e. allowing more responsibilities and power to vice-chancellors and deans).

2.2 The budget of the institutions

Higher education programmes are primarily funded by the state.¹ The state guarantees funding through the Ministry of Education and the Ministry of Research. The Ministry of Education has the overall responsibility for educational matters, whereas the Ministry of Research is responsible for the institutional framework, research activities, management and organisation, staff, buildings, costing and accounting systems. The formal division of responsibilities between the two ministries was introduced by the new government that took office in March 1998. Teaching and research, however, have been funded separately since 1980.

For full-time students there are no tuition fees. Part-time students (most of them in Open University education; *Aben uddannelse*) are charged a fee, covering approximately 25% of the teaching costs. As stated above, before 1980, teaching and research were funded simultaneously. The funding was based on incremental budgeting in which enrolled students, student intake and the institutions' wishes about research were taken into account. In 1980 a formula based budgeting system was introduced with separate funding of teaching and research. Funding of teaching was based on "active students" and student/teacher ratios. Research, administration, other activities and capital costs were still budgeted in an incremental way. The old funding system was regarded as non-transparent and based on too much and poorly organised information. Furthermore, information on productivity was not taken into account.

As a supplement to the basic research funding, a substantial portion of public funds for research is allocated through the *Research Councils*. The basic research funding constitutes approximately 56 % of the total research funds. The rest comes from the research councils and from private donations.

The formula funding system gave the universities a very detailed budget and it worked in practice as a prescription for the internal allocation process of the universities. In 1993 the Danish Parliament passed new legislation for higher education and research. The new University Act gives the universities more financial autonomy. According to the new legislation all university income may be treated as a lump sum which the universities freely can decide upon. Only decisions on large investments remain in the field of the competence of the Ministry. Additionally the new law prescribes that grants for teaching must be allocated according to the *taximeter*

¹ There are some private self-governing institutions that are recognised by the state, for example: engineering colleges (*teknika*), some schools of occupational therapy and physiotherapy, schools of hospital laboratory work, and business schools. All of these types of institutions receive almost all of their funding from the state, but have varying degrees of independence and autonomy (see Eurydice, Information on Denmark, 1992).

principle (see section 2.3.1).

While the total funding increased in the ten-year period (1984 to 1994), it did not keep up with the expansion in the number of students in the same period. This has caused financial problems for a lot of institutions in recent years. One result of this has been a sharp increase in the student/teacher ratio in a number of fields, and this has raised questions regarding the quality of the teaching. Another consequence has been that some of the smaller institutes have not been able to cope with the decreasing budgets and have merged with other institutions.

For the Danish higher education sector as a whole, the government seeks to achieve a more or less balanced composition of the budget which looks like this: (between brackets the figures for the universities are shown)

62% for undergraduate education (Ordinaere uddannelser) (40% of the university budget)
3% for continuing education, adult education (Aben uddanelse)
23% for basic research (33% of the university budget)
12% for targeted research (23% of the university budget).

The public budget for the universities consists of the following elements:

1. a basic grant;
2. a taximeter grant for teaching (see section 2.3.1);
3. a research grant (basic research; see section 2.3.2);
4. targeted research (allocated by Research Councils; see section 2.3.2);
5. a grant for other activities (museums, libraries etc.);
6. a grant for capital expenses.

For the fiscal year 1995 the figures (in Danish crowns, DKK) for universities and for all types of higher education combined are presented in table 2.1.

Included in the figures presented here, is a small amount received by all higher education institutions (*Grundbevilling*), independent of their size. This basic grant is around one million DKK. The largest part of the teaching allocations, however, is based on a formula. Included in the above figures is also a capital grant that higher education institutions receive for the purpose of investments (e.g. laboratories). In principle the Ministry supplies the universities with land and buildings. Financing the large investments directly, the Ministry wants to approve all other investment decisions of the universities.

Table 2.1: Public budget for higher education (1995, mil. DKK)

	universities*	total higher education
teaching	2,180	5,050
research training	110	110
continuing education	100	150
open univ. education	200	230
teaching total	2,590	5,540
basic research	1,980	1,980
targeted research	1,375	1,375
research total	3,355	3,355
miscellaneous**	980	1,400
total	6,925	10,299

* all institutions with a research function

** operation of museums, libraries, botanical gardens

As stated above, the capital grant for universities is not based on a formula. However, in 1994 the Ministry expressed plans to work with formula funding, relating the capital funds to the number of students and/or the number of employees and fields of teaching and research. By means of such measures the Ministry had the intention to transfer its responsibility in the field of investments to the universities. Thus, the universities would be able to decide on all matters relating to the use of current and capital resources.

So far, the universities did not have the freedom to decide themselves on large investments. However, in the non-university sector there have been some important changes. Since 1997, about 50 schools for teacher training and pedagogic schools receive an extra capital grant, as part of the basic (so-called taximeter) grant. This grant, together with the taximeter grant for teaching, is allocated to the institutions as a lump sum. The institutions can make their own decisions on investments. Thus, the institutions are forced to set their own priorities.

2.3 Funding mechanism

In the system of funding that existed before 1980, there was a fixed relationship between teaching, research and academic administration - 50% for teaching, 40% for research and 10% for administration. Since 1980, the funding of research is independent of funding of teaching, while for the latter a system of formula funding was introduced. Until 1992 the funding system led to separate allocations for teaching, research, institutional administration, buildings & costs related to buildings, libraries & computer centres, and a 'miscellaneous' category. For teaching funds, first an equilibrium grant was calculated and the actual grant was found by linear interpolation between last year's grant and the equilibrium grant. All costs apart from the teaching costs were funded on an incremental basis. In 1992 the formula was simplified; teaching grants were

calculated directly on the basis of a prognosis for active students and a set of normative prices. Administration funds were spread over formula-based teaching funds and research funds. In 1993 the government initiated a funding programme to help institutions to cover the costs of implementing PhD programmes. Before 1993 PhD-level degrees were awarded only on the basis of theses. The current system came into existence in 1994 when the government implemented a system, where all of the funding was based on the number of active students. Since 1995 lump sum grants have been issued to the universities. The institutional governing boards (the senates) are responsible for allocating this funding to the faculties. This change was part of the government's plan to decentralise decision-making to the institutions.

2.3.1 Teaching

The funding of teaching (including indirect costs for overhead) is based on a formula in which the key variable is the number of 'active students'. This is called the taximeter principle (*taksameter*). Active students are not the same as enrolled students. It is the sum of 'passed courses' weighted with 'the standard student work-load for individual courses', i.e. full time equivalents. This means that all exams that have to be passed by a full-time student in one year add up to 1. Different exams will have different weights. The exams taken into account refer to the autumn term of the previous year and the spring term of the financial year in question. This means that for his university studies a student normally can gain five points (or 'study step increments' as they are sometimes referred to). In 1994 the number of students enrolled in 11 universities was 95,200, whereas the number of active students was 64,000. For the budgeting process a prognosis of active students is made, based on the same methods as used in population statistics, that is: new enrolments, drop-out rates and average duration of studies.

Once the active students' figure has been estimated, the budget is calculated. The calculation uses a unit cost (i.e. cost per active student) for a number of study areas.

A tariff catalogue (like the one included in the table below) is published yearly in the education Budget Bill (*Finanslov*). It includes a tariff for teaching costs (i.e. education and equipment) and a tariff for overhead costs (administration, rent and maintenance of buildings, and other services), which both differ according to subject area. Next to these, some study programmes have a tariff covering the costs of practical training. The level of the tariffs is not based on detailed cost calculations, they are based on experience and historical data, dating back to the days before the taximeter model was introduced. Table 2.2 gives the tariffs for a number of study programmes. The tariffs for an active student range from 29,600 DKK (e.g. in law and economics) to 92,200 DKK (veterinary science). Formula funding for postgraduate (PhD) students makes a distinction between two types of programmes, namely laboratory-based programmes and non-laboratory-based subjects. For postgraduate students, however, the taximeter model is not operational, because a registration of yearly performance is not made. Therefore, all postgraduate students are counted as active students, limited to a three-year period for each student.

Table 2.2: Tariff (in DKK) per active student in higher education (fiscal year 1998)

Area	Tariff
Law, economy, Danish, history, philosophy etc.	29,600
Psychology, languages, theology, archaeology etc.	33,100
Music, communication, journalism	50,700
Mathematics, statistics	49,100
Pharmacy	70,600
Medicine	60,900
Dentistry	62,500
Chemistry, biology, physics etc.	62,500
Geography	60,900
Physiotherapy	41,700
Veterinary science	92,200
Pedagogy	40,100
Teacher training	39,300
Engineering	71,900
PhD-students: non-laboratory subjects	107,200
PhD-students: laboratory subjects	150,500

Note: Tariffs exclude incidental compensations for value added tax (*moms*)

The annual teaching budget T for institution i in year t is calculated by applying the following formula, which, for the sake of clarity, disregards formula funding of students in continuing education classes (*Aben uddanelse*):

$$T_{i,t} = A_{i,1,t}*(TT_{1,t}+TO_{1,t}) + A_{i,2,t}*(TT_{2,t}+TO_{2,t}) + \dots + A_{i,n,t}*(TT_{n,t}+TO_{n,t}) + PR_{i,1,t}*TP_{1,t} + \dots + PR_{i,k,t}*TP_{k,t} + PGE_{i,t}*(TTE_t+TOE_t) + PGN_{i,t}*(TTN_t+TON_t)$$

where:

$T_{1,t}$ teaching budget for institution i in year t

$A_{i,j,t}$ number of active students in institution i enrolled in programmes belonging to subject area j ($j=1,\dots,n$) in year t

$TT_{j,t}$ teaching cost tariff per active student in programmes belonging to subject area j ($j=1,\dots,n$) in year t

$TO_{j,t}$ overhead cost tariff per active student in programmes belonging to subject area j ($j=1,\dots,n$) in year t

$PR_{i,h,t}$ number of active students doing practical training in subjects belonging to area h ($h=1,\dots,k$)

$TP_{h,t}$ tariff for practical work necessary for subjects in area h ($h=1,\dots,k$) in year t

$PGE_{i,t}$ number of post-graduate students in laboratory-based (experimental) subjects in institution i in year t

$PGN_{i,t}$ number of post-graduate students in non-laboratory-based (non-experimental) subjects in institution i in year t

TTE_t teaching tariff for postgraduate students in laboratory-based (mainly experimental) subjects in year t

TOE_t overhead tariff for postgraduate students in laboratory-based (experimental) subjects in

year t

TTN_t teaching tariff for postgraduate students in non-laboratory-based (non-experimental) subjects in year t

TON_t overhead tariff for postgraduate students in non-laboratory-based (non-experimental) subjects in year t

Performance-related additions to the basic teaching grant are currently in discussion. Like in Sweden, quality premiums amounting to 5 per cent of the teaching budget were proposed. The premium is to be based on the outcome of teaching evaluations. To this end, once every five years a so-called Centre for Quality Assurance and Evaluation of Higher Education will evaluate and compare study programmes offered by individual institutions. However, it is still unclear whether these plans will be realised by the new government. In view of the problem of high dropout rates in Danish higher education, the idea was to award supplementary funds to institutions showing a high retention rate. However, the present taximeter model, as well as the system of student support, already include financial incentives to raise student performance.

2.3.2 Research

Danish universities receive a basic research grant. On top of this basic allocation, institutions can - and are indeed supposed to - apply for supplementary research funding on a project basis by applying to the Danish Research Councils², the Danish National Research Foundation or by bringing in funds from ministerial research and development programmes that exist in areas of special priority (e.g. biotechnology and information technology). This is known as the system of *dual support*. Apart from the targeted research grants, funds are coming in through contract research. On average, for the university sector the total of research funds is exceeding the combined funds for teaching.

The basic research grant is allocated as a lump sum to the institutions. Its level is calculated on an incremental basis. There is an upper limit to total basic research grants, as from 1995 on it is supposed not to exceed one-third of the total teaching and research funding (see section 2.2). Plans were published in 1994 to also tie the basic research grants to performance measures such as the number of active students (including continuing and open education) and the level of research project (e.g. research council) funding. Therefore, future research funding would partly be tied to quality measures.

Since 1997 the Ministry is indeed working with a new model for allocating research funds. Every year 5% of the basic research funds will be redistributed: 2.5% on the basis of quantitative parameters (i.e. number of active students, number of PhD's and amount of contract research) and 2,5% on the basis of qualitative criteria, which are not quite clear yet. The Ministry is conducting some pilot projects on the basis of which the measurement of the quality of research

² The six research councils give financial support to Danish research and also have an advisory function concerning scientific research issues. In 1997 the research councils' total grants for research amount to DKK 1,058 mill. The six research councils are: The Danish Natural Science Research Council, The Danish Medical Research Council, The Danish Agricultural and Veterinary Research Council, The Danish Social Science Research Council, The Danish Research Council for the Humanities and The Danish Technical Research Council.

projects will be determined. The pilot projects are expected to be completed in 1999.

The Ministry of Research is currently considering other measures to increase research efficiency in Danish universities by means of the introduction *development contracts*. The idea is to negotiate with individual universities about contracts for a certain period in which research funding will be linked to performance objectives. At the moment, this idea is discussed in more detail with the universities.

In the face of the growth of universities in the years to come and to make sure that basic research grants will form one-third of the university budget, the Ministry of Education will have to raise the level of allocated basic research grants. In 1995, this has led to 100 million DKK in extra grants. For the following years the amount is 50 million DKK. The distribution of these extra funds partly (50%) follows the number of new student admissions per institution and for the other part (50%) is awarded to those institutions with relatively little basic research funding.

2.3.3 Developments

During the past decade and a half, the system of formula funding has been used much to everyone's (especially the Ministry's) satisfaction. The Ministry of Education managed to move resources from fields with excess supply of candidates to fields with a better balance between supply and demand on the labour market. The Ministry felt that by employing formula funding it was easier to let funds follow the students (the 'consumer') than if it would use an incremental budgeting system - the formula is the argument when you re-allocate. Moreover, the block grant principle gives incentives of economising to the institutions.

Along with the re-allocation of resources the Ministry has managed to achieve a higher productivity in teaching. Over the past ten years, the number of active students per teacher has risen by about 50% on average. Relating funds to productivity gives the institutions an incentive to raise production. In order to raise production, institutions must concentrate on quality in teaching and in planning of the courses. On the other hand, institutions may be tempted to lower requirements at the examinations. However, in Denmark formula funding is still regarded as the right way of funding.

In recent years the formula was modified in order to make it more simple and to establish a more direct relation between productivity and funding. Nowadays, formula funding accounts for roughly 60% of higher education's basic budget (teaching and basic research grants, excluding project funding). For the university sector alone, the corresponding percentage is lower - around 45% - due to the fact that this sector has a relatively large - incrementally determined - budget for basic research activities.

From the previous sections it is also clear that the Danish system of teaching and research funding is presently undergoing changes. This is reflected by the introduction of quality-dependent components into teaching and research budgets. Measures like this are planned alongside a strengthening of the (financial) autonomy of institutions. An example of the latter may also be found in the relaxing and stepping back by the government in matters of entrance limitations.

One of the most recent developments concerns the 5% redistribution of basic research grants.

The redistribution should allow the quality of research to play a larger role in the allocation of research funds. A final development to be referred to concerns the introduction of contracts in the university sector. The idea is to negotiate contracts with the universities that relate their funding to certain performance objectives for a certain period.

2.4 University income from other activities

There is no information available about the revenues from contract teaching. Information about contract research only is available in a very rough form. In 1997, the 11 Danish universities with basic research activities received 1.686 million DKK for targeted research, which is about 19% of their income. About 85% of these grants come from the research councils and cannot be regarded as contract research. The remaining 15% come from other sources and (perhaps) contain grants for contract research. In addition to this targeted research, these universities received about 300 million DKK in the form of miscellaneous income (e.g. rent income, EU grants, etc.). This represented a bit more than 3% of their total income.

2.4.1 Organisation and funding of medical training

No information has been supplied to us on the funding of medical training and the financial relationships between universities and university hospitals.

2.5 Issues indirectly related to funding

2.5.1 Staff issues

In table 2.3, the numbers of academic and non-academic staff are presented. The Ministry has estimated that the percentage of academic staff with a tenured position or a 4-year contract is about 80%.

Table 2.3: Academic and non-academic staff (in fte) in 1996 and 1997

	1996	1997
Full-time academic staff	6869	7069
Part-time academic staff	1747	1745
Non-academic staff	7573	7937
Total Staff	16189	16751

Source: Ministry of Research

Table 2.4 shows the numbers and percentages of academic and non-academic staff by type of activity. If full-time and part-time academic staff are taken together it can be calculated that about 55% of their time is spent on teaching activities and about 45% on research activities.

Table 2.4: Staff by type of activity

	Teaching	Research	Other
Full-time academic staff 1996	3048 (44%)	3609 (53%)	212 (3%)
Full-time academic staff 1997	3191 (45%)	3715 (53%)	164 (2%)
Part-time academic staff 1996	1637 (94%)	81 (5%)	29 (2%)
Part-time academic staff 1997	1632 (94%)	100 (6%)	13 (1%)
Non-academic staff 1996	2216 (29%)	2661 (35%)	2697 (36%)
Non-academic staff 1997	2491 (31%)	2716 (34%)	2730 (34%)
Total 1996	6901 (43%)	6351 (39%)	2938 (18%)
Total 1997	7314 (44%)	6531 (39%)	2907 (17%)

Source: Ministry of Research.

2.5.2 Student related issues

2.5.2.1 Student choice and institutional funding

The budget for teaching of the universities is directly linked to the number of (active) students. If the number of (active) students of an individual university decreases, this will affect its teaching budget in a negative way. Thus, it is not only the number of students that is taken into account, but also their performance.

2.5.2.2 Tuition fees

In Denmark education is free of charges. It is not to be expected that tuition fees will be introduced on the short term.

2.5.2.3 Access, selection and student support

Access to higher education is rather selective in Denmark. The basic arguments for selection

concern budgetary restrictions and a relatively high unemployment rate among higher education graduates. A number of programmes have a *numerus clausus*, like programmes in medicine, teacher training programmes and pre-school teacher training programmes. The ministry of education annually decides on the maximum number of new entrants admitted to these courses. In other programmes the institutions themselves decide upon the number of places offered. Institutional funding is strongly oriented on the number of exams passed by students. Therefore, if an institution admits more students than the capacity allows, the success rate will probably decrease and as a result funding will be restrained. Of course, the danger that institutions are seduced to lower their examination requirements for reasons like these is existent. To prevent such behaviour, a system of external examiners has been introduced.

The decentralised system of selection was introduced in 1991. Its main objective was to improve the efficiency in the implementation of education policy.

Concerning student financial support, it can be said that the present student grant and loan scheme, based on a voucher system, was introduced in 1988. Student support for students of 18 years and older is not dependent on parental income. The state loan interest rate is somewhat below the market rate.

Direct support is available for all students who have a study delay not exceeding 12 months. All students may apply for a grant if their personal income does not exceed DKK 55.500 annually. The maximum amount granted to students living with their parents is DKK 1803 per month. For students living away from their parents, this maximum is DKK 3573 monthly. In addition, they may take up a student loan on a voluntary basis. For both categories of students the maximum value of the state loan is DKK 1857 per month.³ Furthermore, there is no indirect support in the shape of special tax deductions for the students' parents or child allowances for parents having students in their family. In order to be eligible for student aid a student has to be active, which means that he is not allowed to have a study delay for longer than 12 months. Student support is available for the nominal duration of study plus 12 additional months. After that, students can take up a full loan for a maximum period of one year (*finalisation loan*).

2.5.3 Quality assessment

Quality evaluation is one of the so-called 'soft' control mechanisms used by the Ministry of education. The ministry has set up an independent evaluation centre, which can take steps to evaluate programmes. The Danish quality assessment procedure belongs to the 'horizontal' type. In addition to the basic procedure of self-evaluation, visit and public report, the Danish governmental agency *Evalueringsscenteret* may use national surveys among students, graduates, or employers to add to the information that the steering group can use to come to its judgements and recommendations. Another specifically Danish characteristic is that the steering group of the national evaluation in a certain discipline usually contains the visiting committees for all higher education institution, but has the possibility to invite experts to individual study programme visits. The final specificity of the Danish procedure is that a national conference is held among the steering group, representatives of the study programmes evaluated and possibly external experts, before the steering group's report is published.

³ The income threshold and the value of grants and loans refer to 1997.

In none of these activities, students are involved. However, the University Act prescribes that the teaching funds are subject to discussions in study committees consisting for 50% of students. This provides the students a considerable influence in teaching quality, because they partly decide on hiring and dismissing teachers.

2.5.3.1 Implications of the quality assessment for funding

A poor evaluation, which is known to the public, will normally be enough for the university to take action. The idea is that if a university or programme becomes known for its poor quality, the students will not seek admission to it. As a consequence, the university will lose money as a result of the taximeter principle. Although the universities have a large autonomy to design the programmes they offer, the Ministry of Education can close down or limit the intake of students into programmes that have proven to be of poor quality.

3. Flanders

Flanders is one of the three Communities (the Flemish, French and German-speaking Communities) of the federal state of Belgium. Formally, Belgium is divided into three regions, Flanders, Walloon and Brussels. Each of the Communities and regions has legislative and executive autonomy with respect to its higher education sector. Only three very specific areas regarding education have remained under the control of the federal State: fixing the start and finish of compulsory schooling; minimum conditions for the award of diplomas and the pensions' scheme for teachers.

3.1 System characteristics

The Belgian constitution guarantees freedom of and the right to education. The corollary of this principle is that parents may enrol their children in any school they prefer. The Flemish government aims to simplify and modernise its education legislation. For example, the decrees of 23 October 1991 and 13 July 1994 on '*hogescholen*' reformed both long (HOLT) and short term (HOKT) non-university higher education sector, as well as art higher education.⁴ On the other educational levels legislative reforms are underway.

There are three levels of education: elementary education, secondary education and higher education. Higher education is comprised of university education and one-cycle and two-cycle non-university higher education provided by *hogescholen* (*Hoger Onderwijs Buiten de Universiteiten* - Hobu). The Flemish university system consists of eight universities, which 'should, in the interest of society, be simultaneously active in the field of academic education, scientific research and scientific service provision'. There are three cycles in university education, leading to different degrees:

1. the first cycle leading to a '*kandidaat*' degree (bachelor level) after basic university training of 2 to 3 years;
2. the second cycle, leading to a '*licentie*' degree (master's level), which usually requires another 2 to 3 years of study (in some disciplines it takes longer). This degree often entitles one to hold a certain profession;
3. the third cycle offers a variety of degree programmes. The main programme is the doctorate programme, which after at least two years leads to a doctor's degree, only obtained by publicly defending a doctoral thesis. Besides the doctorate degree the third cycle comprises academic teacher education (*academische lerarenopleiding*): Leading to the degree of '*Geaggregeerde van het onderwijs*'. In 1991, two new forms of post-academic education to meet (and stimulate) the demand for continuing education were introduced. First, additional education (*aanvullende opleiding*) on top of one or more academic studies of the second cycle. This

⁴ Ministry of the Flemish Community, Department for Education, Report for UNESCO, *Educational Developments in Flanders 1994-1996*, 1996.

education leads after one year to the degree of ‘*Gediplomeerde in de aanvullende studies van...*’. Second, special training (*specialisatie opleiding*), which is post-academic education to deepen or specialise in a certain discipline. This training leads after one or two years to the degree of ‘*Gediplomeerde in de gespecialiseerde studies van...*’.

The *Hogescholen* should, in the interests of society, be simultaneously active in the field of *hogeschool* education, social service provision and, where appropriate, project-based scientific research in collaboration with a university or other body in this country or abroad. In 1994, non-university higher education consisted of two types of institutions: non-university higher education of the short type (*Hoger onderwijs korte type* - HOKT) and non-university higher education of the long type (*Hoger onderwijs lange type* - HOLT). Since 1994, these institutions are called *hogescholen*, which offer two types of programmes: one-cycle programmes or short programmes, lasting 3 years, leading to the degree of *gegradueerde*, and two cycle or long programmes, lasting 2 + 2 years, leading to the degree of *licentiaat*. Continuing education and post-*hogeschool* education may be provided as well. In 1995, over 160 institutions merged into 29 *hogescholen*. The process was accelerated by a change in the funding mechanism. The fact that the lump-sum budgeting would be related to the number of students in the future made it necessary for many institutions to merge.

In general, enrolment in the eight Flemish universities was relatively stable until 1991, when the trend changed to a constant growth. One of the reasons for this growth is the increase in female participation: in 1985 41% of all students were women; in 1995 it was 48%. Table 3.1 shows that the growth pattern in the non-university sector has been more erratic: the growth in the 1980s stopped in the early 1990s, but picked up toward the middle of the 1990s.

Table 3.1: Enrolment in Flemish higher education by type of institution and discipline

	1985	1990	1995
HOKT	50092	55316	64060
HOLT	19502	25889	27171
Hogescholen	69594	81205	91231
Universities	54159	56904	66686

Source: VLIR, Statistisch Jaarboek van het Vlaams Onderwijs 1996

3.2 The budget of the institutions

From 1987 to 1992, the overall education budget has risen by 26 million Bef, which represented an increase of 13% (4% in real terms). From 1993 to 1998 the public budget for universities grew with 2405 million Bef. In current prices this meant an increase of 12%, in contrast to a 16% increase of the total education budget. In real prices, correcting for inflation, the growth for the universities was 3%. The public budget for universities and total education is shown in table 3.2.

Table 3.2: The education budget per branch of the education system (Bef million)

Current prices	1993	1994	1995	1996	1997	1998

Universities	19683	19746	20162	20758	21473	22089
Total education budget	209793	219581	225749	231905	239155	245399

Source: Verstraete L. (1998), De evolutie van de universitaire basisfinanciering 1993-1998, in: Universiteit & Beleid, Vol. 12, nr. 4.

In contrast to the developments in the funding for teaching and teaching related research, the public funds made available for basic scientific research at universities have expanded very rapidly between 1993 (Bef 3100 million) and 1998 (Bef 5544 million). This is an increase of 79% in current prices. Although no exact data are available, it can be stated that the income from contract research (third flow of money) also increased very rapidly in recent years (Verstraete, 1998b).

3.3 Funding mechanism

Under the legislation before 1991, universities were financed according to the number of students enrolled. Allowance was made, however, for the fact that certain courses (e.g. medicine and engineering) were more costly than others (more extensive and costlier infrastructure). Therefore, the funding related to enrolment was differentiated by discipline; students in medicine and engineering were priced higher as students in other disciplines were.

In the decree of 12 June 1991 the legislator partially changed the way universities were funded. The new funding method is relatively simple, aiming at a decrease of central regulation, an increase in institutional autonomy and steering from a distance. The public funding of universities partly distinguishes between teaching and research. Within the basic grant (first-flow funding) provided to universities, a difference is made between a part for teaching and teaching-related research, a part for investments and a part for social facilities, like housing, student restaurants and other social facilities for students. For each of these three parts, a separate funding formula is in operation.

The Flemish Government informs the institutions annually about the expected allocations for the coming year. The university rectors react to that within two weeks, by presenting their own budget proposal for the coming year. The institutional budget plan shows both the expected expenses and resources concerning the basic funds, investment funds, social facility funds, research grants and other income, like tuition fees and examination fees. The level of the final budget allocated to the institutions is announced to the institutions as soon as the general public budget has been accepted. The grants for the basic funding and social facilities are awarded on a monthly basis, while the investment funds are awarded every three months.

The universities have to inform the Ministry of Education annually about the way the funds they received are spent. The government has to approve this formally. Funds that are still not used at the end of the year can be transferred to the next budgetary year, unless the Minister proposes another purpose for it.

Next to these first-flow funds, universities can also obtain public funds from the second-flow of funding, which is distributed by the national research federations (NFWO, IWT, and IWONL). The different ways of funding will be discussed below.

3.3.1 Teaching and teaching-related research

The first flow of funds for universities (*eerstegeldstroombekostiging*) contains a part which is specifically meant for the costs of teaching and teaching related research ('the working payment to the universities'). This part is provided to the institutions as a lump-sum (*werkingsuitkering*). The lump-sum may be spent according to the own interests of the institutions. From the budgeting year 1996 onwards, these working payments to the universities (denoted by *Wao*) consist of three parts:

- 1) a part for academic courses, doctorates (doctoraten), doctoral programmes (doctoraatsopleidingen) and teacher training courses;
- 2) a part for continuing studies (*Voortgezette Opleidingen*);
- 3) a part for General Practitioner programmes.

The first part of the working grant is organised in a funding model: a funding formula, which is closely linked to developments in the number of students. The funding formula consists of two main parts. First a fixed part and second a variable part. In 1991, when the new model was introduced, both the fixed and the variable components determined 50% of the budget. The flexible part of the funding may vary according the fluctuations in the number of 'education-load-units' (*onderwijsbelastingseenheden* - OBE). A full-time student in humanities or social sciences is equivalent to one OBE, while a full-time student in science (including first-cycle medical and engineering students) is counted as two OBE. Medical and engineering students (second cycle) count for three OBE. Part-time students participating for at least 50% and at most 75% are converted into half of these units. Within the formula, the difference between the actual number of OBE and the number of OBE in a given base-year is important, as expressed in the following formula:

$$W_{ao1995+n} = \{W_{ao1995} + BEB * [(OBE_{1994+n}) - OBE_{1994}]\} * I$$

According to this formula, the basic funding of the institutions (*Wao*) from 1996 onwards is based on the budget awarded in 1995, which is regarded as the fixed part (W_{ao1995}). This part counts for at least 50% of the total basic funding of the universities ($W_{ao1995+n}$). The flexible part of the funding formula is calculated as the multiplication of the constant amount for one basic unit (BEB, Bef 97402) with the difference between the number of 'education load units' (OBE) in 1994+n and the number of OBE in 1994 (at the 1st of February). The total result of this calculation will be adjusted to general economic developments, expressed in a coefficient (I), which is based on the indexes for salaries and consumer prices in a 80% to 20% relationship.

The differences in levels of funding for the various disciplines are expressed in the conversion of the number of students into the number of OBE per institution.

This funding mechanism hardly comprises stimuli to limit the time of study, because funding depends on the number of students. Students are financed for a maximum of twice the nominal cycle time. If a student enrolls for the third time in the same academic year (at the same or at a different university) the institution is not eligible for financing for this student.

The other two parts of the working payment provided to the universities are mainly based on the

number of graduates. The general amounts available for continuing studies and General Practitioners programmes are distributed over the universities on the basis of the average number of diplomas awarded in the last two academic years. Concerning the continuing studies, two types of diplomas are awarded: diplomas in advanced studies (*Aanvullende Studies*) and diplomas in specialised studies (*Gespecialiseerde Studies*). The latter category of diplomas is weighted twice as much as the diplomas in advanced studies.

3.3.2 Investments

The 1991 Decree also states that universities have to present an investment plan for five years, which will be updated annually if necessary. The Flemish government funds the investments concerning the purchase, furnishing or expansion, renovation and maintenance of the estate for teaching, research and administrative activities, and the capital costs going along with it.

Also these investment costs of universities are calculated according to a funding formula:

$$IK_{1994+n} = [IK_{1994} + (“\text{delta}”TBO * EB/m^2)] * IB$$

This formula consists of a fixed and a flexible part. The fixed part consists of the budget allocated for investment costs in 1994 (IK_{1994}). This amount is fixed for a number of years. The flexible part depends on the need for working space for each discipline (“delta” TBO), which is partly dependent on the developments in the number of students. This normative need for surface is multiplied by the basic unit price for each square metre, which is Bef 253,1 (EB/m^2). In addition, the total sum is multiplied by a coefficient (IB), which reflects the index concerning the developments in building costs for the last five years.

In contrast to the basic budget of the universities, the subsidy for investments is earmarked and cannot be used as a kind of a lump-sum.

3.3.3 Social facilities

The allocation of funds concerning the social facilities for students, e.g. student restaurants, housing, etc., as well as maintenance are funded apart from the basic grants and investment funds. The social facilities are also funded according to a funding formula, which includes a fixed amount (the social facilities grant of 1994) and a flexible part that depends on the indexed growth in the number of fundable students:

$$SG_{1994+n} = [SG_{1994} + (“\text{delta}”FE * BESG)] * ISG$$

In this formula, it is indicated that the budget awarded in 1994 is taken as the point of departure. In addition, the formula has a variable part. This comprises a multiplication of the difference (“delta”FE) between the number of fundable students of the previous year ($1994+n-1$) and the number of fundable students of 1993 on the one hand, and the basic allowance for each fundable student, amounting to Bef 9.544 (BESG), on the other hand. The total sum will be adjusted annually according to the coefficient (ISG) reflecting the developments in the general need for social

facilities.

The compensation for social facilities is earmarked, like the subsidy for investments, and contrary to the lump-sum basic funding of the universities for teaching and teaching related research.

3.3.4 Research

In Flanders, public financed research is solely carried out within the university sector. According to the Decree on the *Hogescholen* 1994, the *hogescholen* may also carry out research in co-operation with a national or international university or third parties.

Basic research funds in universities come from two sources. The first way is through the first flow of funds ('the working payment to the universities'), as already discussed in section 3.3.1 'Teaching and teaching-related research'. This part of the research funding is dependent on the number of students. In general, it is assumed (but not prescribed) that about 25% of the first-flow budget of the universities is spent on teaching-related research.

The second way of funding basic research at universities is through the second flow of funds, which is defined as "non-student related funding". The second flow of funds distinguishes between direct (institution related) and indirect (through intermediary organisations) funding. The direct second flow of funds available for basic research make up about 24% of the second flow research funds. These are distributed among the universities on the basis of the number of students and staff. The indirect second flow of funds is distributed by the national intermediary research federations (IWT, NFWO and IWONL). This part counts for about 66% of the second flow funds budget. Allocation of these funds is based on competition between the institutions, where experts evaluate the research proposals. The second flow of funds is for 50% reserved for PhD students and post-doc appointments. The other part is used for (other) research projects. In addition to these public funds, the federal government also allocates second flow funds through the federal Action Programme (*Interuniversitaire Attractiepolen*, IUAP). This determines about 10% of the total second flow funds.

If the first and second flow funds are taken together, the total amount of public funds for research can be estimated at around Bef 9,6 billion in 1996.

Besides the funding of basic research, universities can attract funds from all kinds of contract parties for research and consultancy activities. This is called the third flow of funds. In 1996, the return from the third flow funds amounted about Bef 3 billion for the universities together.

Finally, it can be remarked that the federal government together with the Flemish government is funding three Flemish research institutes, one for information technology (IMEC), one for biotechnology (VIB), and one for nuclear energy research (VITO). Together some Bef 3 billion was spent on these institutes in 1996.

3.3.5 Developments

Since 1996, the funding of universities has slightly changed, because the continuing studies and General Practitioners programmes have been taken out of the basic funding formula and are funded on the basis of the number of diplomas conferred. This change in policy is linked to the idea of a society of lifelong learning. In addition to that, this change implies a first step from the traditional input funding method towards a method of output funding.

In the budgets from 1998 onwards, the basic funding of the University of Gent, the University Centre of Antwerpen and the Catholic University of Leuven have been increased a bit. This was because the subsidies per 'education load unit' (OBE) were below average in the past, although the Flemish Constitution prescribes that all university students should get equal financial treatment.

One of the recent issues in the funding of universities concerns the low budget that is allocated to investments in buildings, research equipment and infrastructure for social facilities. The decreasing budgets and increasing needs are expected to cause substantial problems for the institutions in the near future.

Concerning research, a number of trends can be seen. The importance of external funds is growing and research funds are more and more allocated on a competitive basis.

3.4 University income from other activities

Little information is available about the income structure of the Flemish universities at the moment. Particularly, no data are available at central level. The Ministry of the Flemish Community plans to monitor the annual budgetary reports of the universities starting from this autumn, and to present information on the basis of this material.

3.4.1 Organisation and funding of medical training

Students in medical sciences are funded through the regular funding mechanism for universities. It is very difficult to get insight into the financial linkages between universities and university hospitals.

3.5 Issues indirectly related to funding

3.5.1 Staff issues

Data on staff are relatively scarce as far as the Dutch speaking community of Belgium concerned. The total number of staff employed at Flemish universities was 12.063 (full-time equivalents) in 1996, which was distributed over different types of staff as shown in table 3.3.

Table 3.3: Characteristics of staff employed at Flemish universities (1994)

Year	Academic staff			Non-academic staff			Total (fte)
	full-time	part-time	total (fte)	full-time	part-time	total (fte)	
1994	5702	2476	6540	5169	1227	5800	12340
1996	6112	2998	6367	5150	1198	5696	12063
1998			7524			5948	13472

Source: Vlaamse Interuniversitaire Raad (1994, 1996), Statistische gegevens betreffende het personeel aan de Vlaamse universiteiten.

Note: Academic staff includes both Independent Academic Staff and Assisting Academic Staff.

As can be read from this table, a considerable part of staff at Flemish universities works in part-time, particularly on the side of academic staff. A further distinction can be made between staff that is paid through the working grants, and staff paid outside the working grants. In 1996, 62% of the academic staff and 58% of the non-academic staff were paid through the working grants. The relative share of total staff paid from the working grants of the universities has declined over the last decades from 79% in 1982 to 56% in 1998. We observe a rise in the number of staff paid from sources outside the working grants, coming in through research grants from the national research foundations and contract activities, as well as personnel employed by the national research foundations located at universities and doctoral students receiving a study grant.

Personnel paid by the university hospitals and clinics fall outside these statistics, as well as students having jobs in the university.

Concerning the issue of academic staff holding tenured positions, information is scarce. However, the large majority of staff paid through the working grants of the universities hold permanent positions. Concerning staff employed outside the working grants, it is the other way around. Most of them hold temporary positions. Of this latter category, 4% of the academic staff at doctoral level hold tenured positions as opposed to 37% of the personnel at post-doctoral level.

No empirical data are available on the distribution of academic staff time spent on teaching, research and other activities.

3.5.2 Student related issues

3.5.2.1 Student choice and institutional funding

As can be concluded from the description of the governmental funding formula for the working payments provided to the universities for teaching and teaching related research, the basic funding of universities depends on the level of the budget in the previous year and changes in the weighted number of students. This means that the funding of universities is sensitive to the developments in the number of students.

The governmental funds universities receive for social facilities are also dependent on the budget allocated in the previous year and changes in the number of 'fundable' students. The public funds provided for investments are only indirectly linked to the number of students through the need for square metres.

Recently, starting in 1996, the input based funding has been changed towards output oriented funding in some specific areas. Instead of changes in the number of students, the number of

degrees conferred is used in the funding formula for continuing studies and General Practitioner programmes.

3.5.2.2 Tuition fees

In Belgium (Flanders) students have to pay tuition fees, dependent on the institution and type of programme they attend. Amounts vary only slightly between institutions and are annually raised by the inflation rate. On average, students have to pay Bef 18.000 for university programmes. For the non-university programmes, students have to pay Bef 16.217 for the long-term courses and Bef 2.000 for the short-term courses. Students receiving study grants may also benefit from reductions on the fee they have to pay.

In addition to tuition fees, universities and non-university institutions may charge examination fees with a maximum of Bef 2.000. The maximum for near grant recipients is Bef1.500 and for those with a study allowance Bef 1.000.

3.5.2.3 Access, selection and student support

In principle, access to higher education is granted to all with the required qualifications, including recognised foreign diplomas. Because of the large number of dropouts in the first year of higher education, a more rigorous entrance selection mechanism was called for. In addition, the limited capacity impels universities to restrict the number of students. This discussion is especially raised in the medical studies. The Flemish government therefore introduced an entrance examination for aspirant-students in medicine and dentistry in 1997/98.

In 1971, a new system of student support was introduced. According to this, both grants and loans should be available to students in financial need. However, in practice, only grants are available to students. Study grants are only available to Belgian students who did not yet complete a higher education programme, who are studying at a publicly funded higher education institution and who are studying at a higher level than they did in the previous year. If students do not succeed to pass all exams of a year and have to double a year, they will not be eligible for direct student financial assistance that year. The eligibility for student financial assistance further depends on family income. About 20% of the Flemish students receive a grant. The amount of this grant depends on family income and academic achievement, residential status and the distance between the institute and the place of residence. Students receiving a grant also get a reduction on the tuition fees charged. Finally, because a centrally organised system of student loans is not in place, the Social Agencies of the higher education institutions provide some loans and grants to students in financial hardship. In order to remain eligible for direct grants, Flemish students have to pass 100% of the yearly study load.

Indirect support is provided to most of the families of Flemish students. By law, parents are supposed to take care of supporting their studying children. As compensation, parents receive child allowances for studying children under the age of 25 years. Depending on the number of children, the monthly allowance amounts vary between Bef 3748 and Bef 7983. Another type of indirect support provided to the families with studying children is tax reductions. These tax benefits for parents depend on the number of dependent children. For families with two dependent children, an amount of Bef 22500 can be deducted from taxable income. A third type of indirect subsidies to students is the so-called support in kind, like subsidies on meals, sports facilities and

some student residences.

3.5.3 Quality assessment

Prior to 1991, it was up to the individual universities whether or not to engage in quality assurance. Since then, universities have been obliged to assess the quality of their activities on a regular basis. The Flemish Interuniversity Council (VLIR) more or less copied the Dutch approach — both countries co-operated in a number of assessment processes even before that. However, the Flemish quality assessment procedure was inspired by the Dutch pre-1993 procedure, and so does not contain a student representative in the visiting committees. The government oversees the implementation of the universities' quality assurance activities and may appoint an independent committee of experts to carry out regular comparative research into the quality of education of the institutions. The law specified some sanctions the government can impose in cases when quality remains inadequate for a prolonged period, e.g. abolishing the programme in question (only in the field of teaching, not services or research).

In brief, the universities themselves go through “internal quality assessments” or self evaluations on a frequent basis. These self evaluations take place at the departmental level. In addition to the self-evaluations, the university programmes are subject to external quality assurance in an inter-university context. Based on critical self-analyses, a visiting committee (*Auditcommissie*) consisting of three experts, formulates the minimum requirements it believes the programme must meet. Based on these requirements, the visiting committee drafts a course report for each relevant department, which enables these faculties to work on improving their quality. These, in turn, can draw up a report in which they describe how they implemented the improvements. In addition, since 1996, the universities deliver information about their quality in their annual reports to the ministry on an annual basis.

4. France

4.1 System characteristics

French higher education is marked by great diversity of institutions, of organisation and of admission requirements, which vary according to the nature of the institution and the purpose of the courses offered. The French system of higher education can be divided into three sectors or types of institutions: universities, state institutions (or public schools for higher education), and private institutions (or private schools for higher education).

There are 78 universities, as well as three *Instituts Nationaux Polytechniques* (INP). They offer scientific, cultural and vocational education and are pluri-disciplinary. Each is composed of units for education and research (UFR) for each subject, with common objectives. They may also regroup institutes and schools created by decree, and research departments, laboratories and centres created by decision of the university governing board. Each component of the university determines its internal rules and structures. Thus university institutes of technology (IUT) are attached to universities, as are university teacher training institutes (IUFM), created under the law of 1989, and vocational university institutes (IUP, created in 1991, of which there are now 84).

There is a great diversity of state institutions (or schools) which are under the responsibility of various ministries. The institutions included vary from highly prestigious institutions such as the *Grandes Écoles* for Science and the *Sections de Technicien Supérieur* (STS) to the Schools for Higher Studies and vocationally oriented schools.

The private higher education sector also is characterised by a diversified range of institutions. Most of them are highly selective, such as the *Grandes Écoles* for commerce and management, the few *Sections de Technicien Supérieur* (STS) and the *Instituts Supérieurs de Sciences Commerciales*. Besides, there are some ‘Catholic Institutes’ which are private institutions recognised by the Ministry for Higher Education.

Since 1993/94, the total number of students in French higher education exceeded the number of 2.000.000. Table 4.1 shows the total number of students in 1995/96 and 1996/97 distributed over the various higher education sectors as presented.

Table 4.1: Total number of French higher education students by type of institution (1995/96)

	1995/96	1996/97
Total number of higher education students	2141000	2126500
Preparations intégrées	2200	2400
Classes Préparatoires (CPGE)	76000	78300
Universités	1338300	1315900
Écoles d'ingénieurs	75600	76800
IUT	103000	108400
STS	225200	230300
Écoles de commerce, vente, gestion, comptabilité	50400	47100
Écoles paramédicales et sociales	85600	85400
Other private and public HEI's	184700	181900

Source: Ministère de l'éducation nationale, de la recherche et de la technologie, Repères & références statistiques sur les enseignements et la formation, 1997.

Qualification levels

In general, programmes at universities consist of three cumulative cycles. The first cycle of two years leads to the *Diplôme d'Études Universitaires Générales* (DEUG). The second cycle, which also has a duration of two years, leads to the *Licence*, after which another year of study leads to the degree of *Maîtrise*. However, in addition to this basic structure, through time a number of deviant programmes have been developed. For instance, some specialised *Maîtrise* programmes have emerged without an intermediate *Licence* degree. Furthermore, a number of very specialised and selective three-year programmes have been established, like the *Magistère* and the programmes of the *Instituts Universitaires Professionnalisés* (IUP). The final part of university programmes consists of the third cycle. The first year of this cycle is formed by a vocationally oriented programme leading to the *Diplôme d'Études Supérieures Spécialisées* (DESS), or by a more research oriented programme leading to the *Diplôme d'Études Approfondies* (DEA). The DEA is the necessary prerequisite for participation on the final phase of higher education, the researcher training leading to the *Doctorat*.

The normal duration of the programmes at the *Grandes Écoles* is three years, after having passed a two-year preparatory programme (CPGE). The final degree of the *Grandes Écoles* is called the *Diplôme d'Ingenieur*. The STS and IUT programmes normally have a duration of two years, which are finished with the *Brevet de Technicien Supérieur* (BTS) and *Diplôme Universitaire de Technologie* (DUT) respectively.

In 1991, a general higher education policy paper, called '*Université 2000*', was launched, which aimed at reducing the regional disparities in educational opportunities and to increase the number of higher education students substantially. This latter objective was meant to remedy the deficit in highly qualified technicians.

4.2 The budget of the institutions

The public higher education institutions are primarily funded by the government. The private institutions derive their resources mainly from tuition fees and industry.

The national French budget for Higher Education, including recurrent resources, investments and personnel salaries of all types of public higher education institutions, is annually adopted by the Parliament on government proposal. The part of the public budget for higher education is about 1.2% of GDP. The share of higher education in total educational expenditure has increased from 15% in 1989 to nearly 17% in 1994.

In 1996, the budget of the Ministry of Education was about 350 billion Francs (around 70 billion US\$), which was 19% of the total national budget. The part for higher education amounted approximately 44.5 billion Francs. The governmental aim to increase participation in higher education since the early 1990s resulted in a more rapid increase in the public expenditure for higher education than in the total public budget. In addition to the higher education budget, 29 billion Francs was reserved for research. The major part of these research funds were administered by the national 'research organisations' like CNRS and INSERM, of which most research laboratories are located in universities. Most research labs have a dual administration and funding, partly by the universities and partly by the research organisations. Funds from both sources are kept separately. A merging of these funds has been contemplated by the ministry.

Total expenditure in French higher education, including recurrent expenditure and investments of public and private institutions was about FF 78.070 million in 1996. About 87% was at public expense, around 8.6% came from the students (tuition fees) and about 4.4% came from industry. Companies have to pay a specific education tax (*Taxe d'Apprentissage*). Firms are allowed to pay it directly to the higher education institution of their choice, otherwise it will be levied and redistributed by the Chambers of Commerce. Higher education institutions can compete for funds from these revenues, however, mainly private higher education institutions in the field of business-economics and engineering benefit from it.

4.3 Funding mechanism

Research and teaching are mainly funded through separate streams in France. Since 1984, the funding of public institutions is based on contracts negotiated between the institutions and the Ministry of Education. This so-called contract-policy aims at providing institutions with a long-term framework. Each university signs two contracts on an 4-year basis: one for the whole institution and one for research. The institutional contract comprises priorities for the institutions, e.g. the strengthening of the educational programmes aimed at reducing dropout rates.

Until 1994, the procedures for funding research and teaching were strictly separated, however, since then, the contracts on both areas between the Ministry and the research organisations on the one hand and the universities on the other hand have been more tuned to each other.

In analysing the funding of higher education in France, one should realise that the staffing policy in the public education sector belongs to the authority of the central government. The central government is the employer of nearly all staff. The Ministry of Education allocates posts to the institutions and recruits staff to fill these posts. So, academic staff is appointed by the Ministry.

The procedures may vary by discipline, but in general the appointment processes include a recommendation from an elected local committee (at the university or school) and from an elected national body (National Council of Universities). Administrative and scientific staff are recruited through national competitive exams and appointed to universities without any local interview or consultation. Staff members are civil servants and therefore employed and paid by the State, while they are allocated to the institutions which are formally autonomous from the state administration. Universities employ a limited number of staff on the basis of private contracts. This mostly happens for people specialised in fields where the central administration does not recruit any people, or in the field of less skilled clerical work, or technical staff in temporary employment. In addition, universities contract part-time teachers or ordinary staff to work overtime, which is needed to correspond to the actual needs of the institution. As a consequence, a substantial share of the resources institutions obtain for recurrent expenditure is used for extra staffing. But hiring part-time teachers or paying regular staff to work in overtime is much cheaper than appointing additional full-time lecturers. This is the reason why a compensation for staff working overtime and for part-time staff has always been taken into account in the funding formula for recurrent expenditure.

In the same way, buildings are mainly funded and built by the ministry and they are owned by the state and allocated to the universities. Increasingly, local authorities, especially regions, take part in the funding of new buildings. It is envisaged that the ownership of the buildings is transferred to the universities. However, because it is doubted whether the institutions can handle the matter, the implementation of this idea is continuously postponed.

Below, the major regulations concerning the funding of teaching (recurrent expenditure), research and investments are discussed.

4.3.1 Teaching

The funding for teaching partly takes place through the staff employed by the state and allocated to the universities. The other part is received by the institutions in the form of recurrent funding. The separately determined teaching funds are allocated to the institutions as a lump-sum fund, with the exception of the IUT units which are linked to the universities but which are funded in a separate way and have their own staff. The same goes for the STS, which are funded separately, although they make part of the secondary schools.

In 1993, the funding model for public higher education institutions was changed. From 1976 to 1993, universities were funded through the so-called GARACES-model. This model used a very complex formula in which three types of subsidies were integrated on the basis of: 1) the number of square-metres, 2) the number of contact hours and 3) the number of complementary hours (which were additional hours caused by capacity problems as a result of a growing demand for higher education). In addition to these three types of subsidies, some further earmarked funds were allocated to the institutions. One of the major characteristics of French funding was – and still is – that personnel is paid directly by the government. Consequently, there is no allowance for salaries in the university budget.

With the introduction of the SANREMO (*système analytique de répartition des moyens*) model in 1993, the funding formula was simplified. As opposed to the GARACES-model, the SANREMO model also applies to the public *Grandes Écoles*. According the SANREMO model, the funds are

allocated to the institutions on the basis of the number of students and standard costs per student. In this model, the Ministry of Education calculates the product of the costs per student and the number of students in each study programme per university. Until 1997, the costs per student, are determined for 36 different types of study programmes by an agency that has been specifically formed for this purpose, namely the *Observatoire des Coûts de l'Enseignement supérieur*. For 1998/99 a distinction will be made between 18 different standard ratios of teaching hours per student, which will result in 18 different categories of costs per student used for the funding formula. This distinction is shown in table 4.2.

Table 4.2: The standard ratio of teaching hours per student (universities) by subject and type of programme

Dicipline / type of programme	Teaching hours per student
Law & economics (DEUG)	5.8
Law & economics (License et maitrise)	7.2
Social sciences (DEUG)	6.6
Social sciences (License et maitrise)	7.0
Languages, education and geography (DEUG)	8.5
Languages, education and geography (License et maitrise)	8.6
Natural sciences & computer science (DEUG)	13.0
Natural sciences & computere science (License et maitrise)	15.2
Maths (DEUG)	9.0
Maths (License et maitrise)	13.5
IUT Law, business, economics, social sciences	27.3
IUT Sciences, engineering	36.5
IUP Law, business, economics, social sciences	27.3
IUP Sciences, engineering	36.5
Engineering	40.0
DEA	10.0
DESS Law, business, economics, social sciences	12.0
DESS Sciences, engineering	20.0

Source: Chevaillier, 1998.

The *Grandes Écoles* are funded according to a higher tariff. The formula does not include any fixed costs, but is adjusted in line with the scale of the institutions (based on the number of students). Furthermore, institutions may receive additional funds for specific projects, which are laid down in additional contracts. Finally, some resources of the institutions may come directly from the ministry and do not appear in the budget-statement of the institution.

All tuition fees paid by the students are deducted from the calculated allocations. Subsequently, some adjustments are made to reckon with differences in the staff-student ratio's between institutions. The actual amount allocated to the institutions can be finally reduced if the resources available at the ministry do require so. As a result of this, in the first years after the introduction of the SANREMO model, the institutions received only about 80% of the fundable costs.

The SANREMO model is relatively simple and is accepted by the institutions. However, one major

problem remains, because the educational staff still is funded separately. This makes that the human resources management (salary, appointment, contracts and vacancies) still make part of the authority of the government. In addition, the number of appointments fluctuates annually. In total, personnel expenditure determines about 73% of the higher education budget.

4.3.2 Research

Research is publicly funded in a dual way. On the one hand, universities receive personnel and grants from the Ministry of Higher Education and Research (*le Ministère de l'Enseignements Supérieur et de la Recherche*), partly based on research evaluations. On the other hand, research units of the universities receive resources on the basis of their relationships with national research organisations (*grands organismes de recherche*), like the *Centre National de la Recherche Scientifique* (CNRS) and the *Institut National de la Santé et de la Recherche Médicale* (INSERM).

The first type of research allocations mainly concerns the funding of doctorate programmes, research schools and the research institutes recognised by the major research organisations, like the CNRS. Of the resources for research teams and laboratories, universities may only spend 15% for the execution of their own research programme. This type of resources (*subventions liéé à l'activité de recherche*) are allocated on the basis of contracts between the ministry and the institutions.

The second type of research funds, which form the major part, comes from the public research organisations. These research organisations are independent public bodies, but they have close relationships with the academic world. They maintain their own research groups and fund the staff of university research teams. The previously mentioned CNRS and INSERM are the largest research organisations. Their allocations to the university research teams often cover a contractual period of four years and are mostly granted to the research teams directly. Allocation of the money requires a quality assessment, which makes the grants competitive. Criteria used in assessing research quality are fairly standard, namely measured by the quality of the research plan, the realisation of past plans, the number of publications and scientific achievements. A peer review is conducted by elected members of the Comité National du CNRS. They decide on the creation of new units, the association of university units and the level of funding. In a sense, they rank nearly all research units in different categories (those attracting more or less public funding). On the basis of these categories, the agencies' budgetary appropriations are distributed among the research units by seven "scientific directors" who are in charge of a sector of research. In exactly the same way as in the education sector, research staff are centrally appointed, paid and allocated among units.

Besides the two major sources of research income, higher education institutions can also derive some resources from the regional authorities (*les collectivités locales*), which have their own research and development funds, and from all kinds of private partners interested in contract research.

4.3.3 Investments

The investments are funded mainly in the same way as staff are. Buildings are mostly owned by the state, which allocates them to the universities. The financing of buildings takes place mainly through the Ministry. However, local authorities increasingly take part in the funding of new buildings. The ownership of the buildings belongs to the organisation that took care of the largest part in the funding. Recently, the Ministry has been contemplating to transfer the ownership of the buildings to the universities. However, because the universities fear for that new situation, based on the idea that they will have to introduce depreciation allowances in a system that does not have any experience with that, it has been constantly postponed. In general, it can be stated that the universities do not have control over capital resources needed to produce education, in the same sense as they do not have control over personnel policies.

4.3.4 Developments

In French higher education policy, at the end of the 1980s a shift occurred from central planning towards a steering methodology by means of contracts. This move was part of a larger reform of the public administration in the spirit of the 'Management by objectives' doctrine, applied in a number of fields of public policy. In 1991, the first contracts between the Ministry of Education and the higher education institutions were signed, comprising the University Strategic Plans. The share of the contractual component of recurrent funding is at the moment about 7% (excluding the salaries paid by the state) and is aimed to grow to about 10% in the near future. In 1996, the national research agencies (e.g. CNRS) became involved in the negotiations of these contracts, which thereby acquired a truly comprehensive scope by including external funding of research laboratories operating inside universities. The local authorities, which have been granted a large share of responsibilities and fiscal resources since 1983, recently started to finance the development of universities and higher schools, in particular to meet the training needs of local industry. As a result of these developments, universities expressed a growing need for real autonomy, a new type of managers and better internal information systems. However, the new policies did not lead to a loss of control by the central State. On the contrary, it can be said that the overall control of the Ministry has increased with the focus shifting from detailed administration to strategic management.

The allocation method for the budget year 1997 incorporated some changes. The grant to each university (*Dotation globale de fonctionnement* - DGF) is made on the basis of its financial need (*besoins en crédits*). Financial needs come from two types of costs. First, staffing costs. On top of the salaries paid directly by the ministry to permanent staff, universities get a financial compensation in case they are understaffed. Understaffing (for teaching staff) is measured by comparing the "teaching potential" of permanent staff (teaching load x number of staff) with the "teaching need" (number of hours per student x number of students). When the need is higher than the potential, a university is entitled to compensation for paying overtime or for hiring temporary teachers. The compensation is valued at the official standard rate for an hour of teaching, set by decree every year. Concerning administrative and support staff, permanent staffing is compared with a standard ratio, and universities are compensated when their staffing is lower than the

standard set (staff is valued at FF75000 per year).

Second, operating costs are made up of two parts: 1) teaching cost (*coût de fonctionnement pédagogique et matériel*) FF80 or FF140, according to subject ("tertiaire" and "secondaire" - basically, non-science and science+engineering); and 2) costs related to maintenance (*logistique immobilière*): FF 100 per square meter of built area used for teaching. These together produce what is called "normative financial needs". If budgetary appropriations are not sufficient, grants are increased proportionally. Besides financial grants, universities are also allocated new staff, teaching and non-teaching, according to the degree of understaffing, to remedy their "potential" for the next years.

4.4 University income from other activities

The separation of the budget by the types of activities and costs is rather difficult. *Le Compte de l'éducation Supérieure* only provides insight into the budget for teaching, not for research. The data show the following results (see table 4.3):

Table 4.3: Expenditure of higher education by sources of revenue (1996)

Source of revenue	% of budget
Ministry of Education	68.2
Other Ministries	9.6
Regional authorities	6.1
Other public bodies	2.4
Industry	4.5
Private households	9.2

Source: Le compte de l'éducation (1993-1996).

Note: All higher education institutions included, research excluded.

In 1996, the central government financed 78% of all higher education expenditure for teaching, out of which 68% came from the Ministry of Education and almost 10% came from other ministries. Local authorities, like towns, districts and regions, together with other public institutions like Chambers of Commerce, contributed 8.5%. Industry directly financed 4.5% and the share of households (mainly through fees) was about 9%. The role of the Regional Council has grown over recent years, because they more and more are financing new buildings in order to ease the strain of overgrown universities and to promote new vocationally oriented programmes. Other local authorities, particularly in medium sized towns, increased their share of funding in the last decade in order to promote local economic and social development. The role of the Chambers of Commerce and Industry is mainly focused on (private) Business and Engineering Schools and its share is stable or even declining. The role of industry is predominantly connected to the so-called "apprenticeship tax", through which firms have to pay a payroll tax (about 1% of their payroll) to finance vocational education. This tax is waived when they spend directly for this purpose, either by offering student internships, or by transferring funds to an educational institution of their choice (offering vocational programmes). For some Business Schools (Grandes Écoles), these funds can make up between a quarter and a third of their total income.

Additional data sources come up with extra information. For example, the *Annuaire des établissements d'enseignement supérieur* of the Ministry of Education, Research and Technology (1997), provides a breakdown of the wage bill of the institutions. The proportion of the wages paid by the state (88%) are distinguished from the proportion of the salaries paid by the institutions themselves (12%). These data refer to 1995.

In the publication *Financement et effectifs de l'enseignement supérieur* of the Ministère de l'Éducation Nationale, de la Recherche et de la Technologie (1998), a breakdown is given of the total resources of the institutions. It concerns a breakdown into the grants received by law through the ministries and the so-called "ressources propres", including student fees, research contracts and teaching contracts. In 1996, the share of the income from the "ressources propres" was about 45%, as shown in table 4.4.

Table 4.4: The sources of income of universities (1996)

Sources of income	Universities	All HE-institutions
Ministry of Education	50%	49%
Other Ministries	6%	6%
<i>Total budget allocated by law</i>	<i>56%</i>	<i>55%</i>
Local and regional authorities	5%	5%
University duties	11%	9%
Apprenticeship taxes	2%	3%
Research grants	6%	6%
Adult education	7%	7%
Financial products	2%	2%
Teaching activities	6%	6%
Sales of products and publications	1%	1%
Other activities	1%	2%
Exceptional products	4%	4%
<i>Total other income</i>	<i>44%</i>	<i>45%</i>
Total income	100%	100%

Source: Ministère de l'Éducation Nationale, de la Recherche et de la Technologie (1998).

Note: The data do not include all ministerial payments to personnel, laboratories, etc.

4.4.1 Organisation and funding of medical training

The medical schools are an integrated part of the university system and therefore no effort has been made to exclude expenditure. The University hospitals (Centres Hospitaliers Universitaires, CHU) are closely linked to the universities. The CHU staff is partly regarded as academic staff, but medical staff without any university position is not regarded as university staff. Medical staff with teaching and/or research positions is paid in a dual way (once as doctors by the hospitals and once as university staff by the Ministry of Education). Although medical schools are closely associated with CHU, they are managed and funded in a totally separate way, under the

jurisdiction of two different ministries.

The payments by patients for health care are going to the university hospitals themselves and have nothing to do with the ‘university-function’ of these hospitals. However, medical schools and CHU often do their laboratory tests using university infrastructure, for which they have to pay. This provides very substantial “*ressources propres*” to some universities. However, CHU mostly conduct their research in laboratories operated and funded by the INSERM. In this case, the funds are administered by INSERM and do neither show up in the university budget, nor in the hospital budget.

4.5 Issues indirectly related to funding

4.5.1 Staff issues

The total number of academic staff in higher education, calculated in full-time equivalents, amounted 75800 in 1995/96. The numbers are distributed over the various types of institutions in the following way (table 4.5).

Table 4.5: Academic staff at higher education institutions (1995/96)

Institution	Number (in fte)
Public universities	54000
IUT	11000
IUFM	4500
Public schools of Engineers and other public HEIs	6300
Total	75800

Source: *Informations sur le financement et les effectifs de l'enseignement supérieur*, 1996.
Martin, J.C. and A. Verdaguer (1997).

These statistics do not include private schools, where academic staff generally consists of a limited number of permanent personnel and a considerable number of part-time teachers.

The number of academic staff and support staff engaged in teaching activities is also an element in the SANREMO funding model, which has been applied since 1993. For academic staff, the model attaches to each discipline and each cycle a normative student/teacher ratio, which varies between 6.5 for scientific vocational first cycle studies and 52.5 for basic studies in law. The average value of the student/teacher ratio used is about 25.

4.5.1.1 Characteristics of staff employed

Most positions at universities comprise full-time appointments. Only a limited share of the academic staff (about 5%) holds a part-time position (*Informations sur le financement et les effectifs de l'enseignement supérieur*, 1996). Because the academic staff at public institutions is mainly appointed by the Ministry, these posts have a more or less permanent character. These

posts can be separated from the so-called *attachés et moniteurs*, which concern academic staff hired on a temporary basis for teaching, training and research activities. Since the late 1980s the relative share of these *attachés et moniteurs* in the total number of academic staff grew from about 4% to about 10% at present.

4.5.1.2 Academic staff by type of activity

Time budget surveys are virtually non existing. However, some sources can be used to come to a rough estimate of the time spent on teaching, research and other activities. The first source concerns the reports of the *Observatoire des Coûts*, which show the time allocation of academic staff at various universities. The outcome of said reports may be that the time allocation varies considerably according to the type of academic staff, discipline and the type institution. If the results are merged into one figure for teaching and research, a distribution of 50% for both would appear. A second source concerns a study among technical and administrative support staff. This study also comes to the conclusion of a 50-50 divide between teaching and research. However, these sources both do not include data for teachers 2nd degree, who have a full-time teaching load, and the academic hospital staff, who have a teaching coefficient of 40%. If it is regarded that total academic staff at universities consists of 66% regular academic staff (*enseignants / chercheurs*), 17% teachers 2nd degree and 17 % academic hospital staff, then the overall teaching ratio of academic staff lie in the region of 55% to 60%.

4.5.2 Student related issues

4.5.2.1 Student choice and institutional funding

As can be read from the funding model, the funding of universities is heavily dependent on the number of students enrolled. This makes French universities very sensitive to changes in student choices. This is even strengthened by the fact that the standard costs per student allocated to universities differ per discipline.

4.5.2.2 Tuition fees

In France, all students, except those receiving a study grant, have to pay tuition fees. The amount to pay depends on the type of programme and the type of institution one is enrolled in. The level of the tuition fees charged at public higher education institutions is decided by the Ministry of Education. The levels vary from FF 744 for basic studies up to FF 5100 for degrees in specific subjects. Registration fees charged by private institutions vary between FF 10.000 and FF 40.000 annually. These institutions are free to set their own fees. In addition, French students have to pay a health insurance fee varying between FF 1.500 and FF 2.000 annually.

4.5.2.3 Access, selection and student support

Public higher education in France has open access. Everyone qualified is allowed to start studying at a public university. In contrast, admission to other institutions (IUT, STS and CPGE) is highly

selective. Candidates are selected *sur dossier*, which means that no entrance examination is taken but students are selected on the average grade level of their baccalauréat and their curriculum vitae. Grandes Écoles may use their own selection criteria. In general students need a Baccalauréat to enter higher education. However, applicants over 20 years old with two years of relevant working experience or applicants of 24 years and over have the possibility of taking an entrance examination. Government recently also is demanding that particularly universities have to strive for a fair regional representation.

The juridical obligation to admit all required candidates to the first year of university programmes does not imply that students have a free choice. Although no formal *numerus clausus* is in force, institutions use their own selection criteria to have control over the intake of students in certain disciplines. For instance, the maximum intake is based on the capacity of the institution.

Admission to the Grandes Écoles is very selective. Each Grande École may use its own selection criteria and procedures, like a verbal examination or personal interviews. On average, about 50% of the candidates are admitted, however often not to the study of their first choice.

The system of direct student financial support in France mainly consists of grants. Grants vary between FF 7.170 and FF 19.300 annually, depending on family income, the number of children in the family, the residential status of the student, the distance to the higher education institution and the level of the programme a student follows. Only a quarter of the students (about 405.000) receive a grant, which at maximum covers half of the costs of study and the cost of living. Students not eligible for a grant may receive an interest free loan (*prêts d'honneur*), which is income contingent loans and is allocated by a committee of the education institution (*Académie*). Since 1991, some groups of students (those from low income families with a maximum income of three times the social minimum) have become eligible for bank loans at commercial rates guaranteed by government.

In addition to the direct student support, French families with studying children benefit from child allowances and tax deductions. Parents are financially responsible for their children until the age of 18. In addition, parents can benefit from child allowances and tax reductions if their children are under the age of 26 and are following (higher) education. The amounts of these benefits depend on the number of children in the family. Child allowances for the first child amount FF2.054, for the second child FF 2.660 and for any further child FF 2.855 annually. Furthermore, tax reductions are available for families with (studying) children.

Finally, students may be eligible for a lodging-allowance of FF1.053 in Paris and FF 924 in other parts of the country. Students are also indirectly subsidised through support in kind, like cheap meals and housing facilities.

Students receiving student financial support have to pass all exams of the annual programme in order to stay eligible for student grants. This implies that student support at maximum can be provided for the nominal duration of the study programmes.

4.5.3 Quality assessment

The French evaluation procedure in higher education is the prime example of a 'vertical' evaluation system. By this we mean an evaluation that follows the hierarchical lines: it assesses certain aspects of the efficacy and efficiency of the higher education institution's management. In the French higher education system, the quality aspects involved include the climate that the

institution provides for student learning. The main emphasis is on the particular contract that exists between the individual institution and the ministry of education. Students are not directly involved in this evaluation procedure. The assessment and enhancement of the quality of teaching is not directly made by inspectors. However, the assessment is carried out by committees of peers on the basis of personal or institutional reports. In this procedure, the *Comité National d'Evaluation* gives general advice to Faculties, higher education institutions or to disciplines in all of the country.

In cases faculty members seek promotion, they are indirectly assessed by the *Conseil National de Universités*, which is divided into sections by discipline.

4.5.3.1 Implications of the quality assessment for funding

There are no direct links between the result of quality assessment and university funding. However, indirectly, the results may influence the responses to requests for additional teaching posts of universities.

5. Germany

5.1 System characteristics

Higher education policy in Germany is in fact an aggregate of sixteen potentially different policies, according to the sixteen states (*Länder*) responsible for higher education. The government role regarding higher education is traditionally rather strong, as can be noticed from the various supervisory rights of government and the public funding mechanisms. On the other hand, the notion of academic freedom is considered of paramount importance. The emphasis on the research function of the university means that scientists determine teaching and research, and that their right to administer the internal affairs of higher education institutions is respected.

The integration of differentiation, competition and general performances of the institutions into higher education policy is one of the current issues. Also, the growing number of students, the low priority of higher education on the political agenda, and the time students take to obtain a degree are major concerns. Finally, in discussing higher education policy, the reunification of East and West Germany has to be taken into account.

The universities (*Wissenschaftliche Hochschulen*) and the *Fachhochschulen* are the two main sectors of German higher education. Studies at the universities lead either to the *Diplom*, awarded by the respective institutions, or to the state examination (*Staatsexamen*) (for teachers, law, medicine, and pharmacy). The normal length of studies is supposed to be 10-12 semesters (this varies by subject). *Fachhochschulen* award the *Diplom* (FH) degree, which is supposed to be passed after a normal length of study of 8-9 semesters. The *Fachhochschulen* are vocational education oriented, and their professors conduct only applied research to a certain extent. While university professors have to teach only 8 hours per week, the *Fachhochschul*-professors' teaching load amounts to 18 hours. *Fachhochschulen* are expected to play the role of providing short courses with practical and vocational orientation. Most programmes require students to spend some time before or during their studies in practical situations (internships).

Access to universities, in principle, is open to all those who have passed the final examination of secondary education, and have been awarded the general *Abitur* (*allgemeine Hochschulreife*). Those holding the *Abitur* degree have the right to study at any category of higher education institution, in whatever subject they want. To be admitted to *Fachhochschulen*, a specialized *Abitur* (*Fachhochschulreife*) is required, which is awarded at the so-called *Fachoberschulen*. The individual degree holder is eligible to study a special subject only according to the specialisation of his/her *Abitur*. Currently, there are no tuition fees in German higher education.

German higher education institutions are open for access only "in principle". Institutions have to accept students based on the number of student places available in the respective fields of study at the respective institutions. The number of student places is calculated on the base of national norms, student-staff ratios, according to the *Kapazitätsverordnung*. In those fields of study in which student demand exceeds regionally or nationally the number of student places available, access is administered by a national admission office (*Zentralstelle für die Vergabe von Studienplätzen*, ZVS). Nationally agreed (among the *Länder*-Ministers for Higher Education), in

this case, a field of study is either declared to fall under limited admission (*numerus clausus*), or under an "allocation system" (*Ortsverteilungsverfahren*), in which students, who have to apply for a student place at the central office, are not sure of being "allocated" to the institution of their first choice. In the case of a *numerus clausus*, *Abitur*-scores and social factors (such as "queuing time" for a student place) are taken into account.

Maybe due to the still "non-advanced age" of the *Fachhochschul*-sector, only one fourth of the student population is educated in this sector, while in the universities (together with the arts and music academies) the remaining students are enrolled. Of the 267 institutions in West Germany (the 68 institutions in the East are still in a process of restructuring and adjustment to the Western sectoral structure), 93 are universities, 32 are arts and music colleges, and 142 are *Fachhochschulen*. *Fachhochschulen* are usually smaller in size according to student numbers, while some universities have grown to spectacular dimensions (e.g. in 1996/97: LMU Munich 58,000 students; FU Berlin 44,000; University of Cologne 60,000; University of Münster 44,000; University of Hamburg 42,000). Forty-nine institutions are non-public, but the number of students in private institutions compared with the overall population is negligible. With only few exceptions higher education institutions are governed and financed by their respective states. Their legal status is as a public institution and at the same time an organizational unit of the state (*Körperschaft des Öffentlichen Rechts und zugleich staatliche Einrichtung*).

In the reunified Germany in the "Wintersemester" 1996/97 1,838,400 students were enrolled in 335 institutions of higher education. In 1993 in former West Germany about 33% of the 18-21 age group was enrolled in higher education. The former GDR, with its 208,300 students in 1996/97, had a relatively low enrolment percentage of the same age group (22.5% in 1993), compared with Western standards. As in many other countries, enrolment in German higher education has grown tremendously since the 1960s: in 1960 only 4,3% of the 19-26 age group was enrolled in higher education in West Germany compared to 25,1% in 1991, while the newly enrolled students in 1960 and 1989 represented 7,9% and 29,1% of the 19-21 age group, respectively. This percentage of the newly enrolled age group continued to increase (in 1991 35,6% in West Germany, 31,8% in all Germany). Table 5.1 shows enrolment figures from 1980 onwards.

Table 5.1: Enrolment in German higher education (headcount; x 1,000)

	West Germany			GDR
	Universities	Fachhochschulen	Total	Total
1980	842	202	1,044	130
1985	1,036	301	1,337	130
1990	1,212	373	1,585	133
1994	1,278	398	1,676	181
1997	1,246	385	1,630	208

Sources: Federal Ministry of Education and Science, Basic and Structural data.

AKTUELL Bildungswissenschaft: Studenten an Hochschulen, 1975 bis 1991, 7/92, BMBW.

Statistisches Bundesamt, Statistisches Jahrbuch 1997.

5.2 The budget of the institutions

In table 5.2, figures are presented for the total expenditure of all German institutions of higher education from 1980 through 1993. Public expenditures (1975 - 1992) on higher education are presented in table 5.3. Despite the enormous growth in enrolment (see table 5.1) public expenditure (in real prices) hardly increased. As a consequence the German system of higher education is in a financial crisis.

In 1992, 32,769 million DM was spent from the public purse on higher education. The percentage allocation was as follows:

- basic subsidies (*Grundmittel*): 26,630 million DM (81.3%);
- additional research grants (*Drittmittel*): 2.327 million DM (7.1%);
- student aid, postgraduate study grants, etc.: 3.812 million DM (11.6%).

The federal government (*Bund*) provided only 17% of these funds, while the *Länder* governments financed the residual and major share of the higher education expenditure.

Universities, more than the Fachhochschulen, have additional research income (*Drittmittel*). Of the funds devoted to universities in 1992, 87% was considered to be basic subsidies and 13% was additional research income. Of this additional research money, 30% originated from private sources.

Table 5.2: Expenditure of German institutions of higher education (in million DM)

	Universities		Fachhochschulen		Total
	current exp	investment	current exp	investment	
1980	14613	2444	1178	192	18427
1985	18895	2586	1533	275	23309
1990	24876	3442	1980	376	30675
1993	41527	4241	3198	598	44725

Note: From 1991 on: former GDR included; academic hospitals included.

Source: Statistisches Bundesamt, Finanzen der Hochschulen 1993.

Table 5.3: Public expenditure on higher education (in million DM)

	1975	1980	1987	1989	1992
Basic subsidies	10391	13104	16626	17799	26630
Drittmittel	987	1247	1817	2021	2327
Student aid	2199	2466	2054	2058	3812
Total	13577	16817	20497	21878	32769
Total (prices 1980)	16992	16817	16940	17240	22460

Note: 1992: former GDR included.

Source: Wissenschaftsrat, Eckdaten und Kennzahlen zur Lage der Hochschulen, Stand 1996.

In the next section, attention will be paid to the way basic subsidies are allocated to the institutions of higher education. Below, we will discuss shortly the allocation of additional research grants.

The total research budget for public and private research institutions in 1995 was allocated to the different sectors as follows: industry and private research institutions 66%, higher education institutions 18%, non-higher education institutions 15%.

Academics compete for *Drittmittel*, which - as mentioned above - account for 13% of the universities' budgets on average. The total amount of money available is limited, and those who want to benefit from these funds have to apply. Applications are usually scrutinized by peers (peer review), before the respective foundation or the German Research Society (DFG) funds projects. This is, however, not a competition between institutions but rather between individual researchers or research groups.

Higher education's main competitors for both public and private research funding are, without any doubt, the publicly maintained non-university research institutions. Contrasting the research budget of these institutions against research money spent at universities, the *Wissenschaftsrat* came to the conclusion that, indeed, the proportions changed exactly at the time when universities had to bear a teaching overload. While in 1975, universities spent 47.2% of the German public institutions' research budget, the share amounted to only 42.8% in 1987, which might not tell the whole truth, since funds devoted to research are not easily separated from the overall funds devoted to higher education institutions. The share of the non-university research units grew from 43.1 to 46.3% during the same period.

5.3 Funding mechanism

5.3.1 Grundmittel

German higher education is publicly funded, and institutions have to follow the budgeting and accounting laws of German public administration. These laws, although set by the individual states, are more or less similar across the country. The main restrictions derive from rules such as:

- the line item budgets (representing expenditure categories) are fixed prior to the fiscal year;
- the budget may not be spent "across" line items;
- institutions do not get lump sum funding for staff expenditure, rather it is - according to the *Stellenplan* - allocated on a position by position basis; thus, institutions cannot spend personnel funds for other purposes, even if this is deemed to be necessary and appropriate;
- funds (unspent balances) may not be transferred to the following fiscal year.

The annual budget, in which the state subsidies for the individual institution are presented, is included in the state law. The budget is subdivided into expenditure categories (line items) and positions (for personnel (described in the so-called *Stellenplan*). The budget is an integrated budget for education and research. Teaching and research are not funded separately. Usually the budget is already subdivided according to the institutional structure, and the positions are already assigned to the departments and institutes. The budget thus pre-determines the total expenditure process for the fiscal year.

The public (basic) funding of institutions of higher education is - apart from some exceptions (see section 5.3.3) - not the result of using a formula for calculating budget components. The funding is based on institutional budget requests, each approved - in a process of budget

negotiations - by the authorities on the basis of institutional assessments (allowances by reimbursement). The starting point is the *Stellenplan* of the last year. Therefore, the budgeting process can be characterised as incremental and input-oriented. The amount of *Grundmittel* received by a university or Fachhochschule is not so much influenced by the actual number of students.

During the last few years in four *Länder* a small part of the budget is allocated by means of formula funding. These states are: Niedersachsen (1% of the budget), Nordrhein-Westfalen (4.5%), Sachsen (5.2%) and Rheinland-Pfalz (5.8%). We will return to this later on.

5.3.2 Investments

Financial investments in new buildings, equipment for new buildings, and equipment above a certain threshold level (150,000 DM) is financed jointly by the *Länder* and the federal Minister of Education. The *Länder* ministers may decide to bear the total amount of these investments. However, if they want to receive federal money, they have to process the project through the national planning procedure (*Rahmenplan*), in which the *Wissenschaftsrat* evaluates the application and a joint national body of the *Länder* and the federal government makes the decision on whether or not to allocate funds. Construction and maintenance of buildings is neither decided nor administered by the institutions themselves. Special *Länder* administration "offices" (*Staatshochbauverwaltung*) are in charge of these tasks. Only the operating of the buildings is budgeted and administered by the institutions.

5.3.3 Developments

There are signs that state governments (*Länder*) are willing to give institutions more flexibility with regard to the (internal) allocation of funds according to their own discretion, and with less limitations fixed in advance. In a few states (Hessen, Niedersachsen, Hamburg, Bremen and Nordrhein-Westfalen) some selected institutions have been provided with a certain extended flexibility to spend across the line items. In quite a number of states, pilot attempts are planned or underway to test "block grant budgeting" (*Globalhaushalt*), which should give the institutions more leeway in the internal allocation of funds and positions and with respect to budget carry-over to the following fiscal year.

During the last few years in all the *Länder* the introduction of performance budgeting for the allocation of parts of the basic funding has been discussed. In four states, pilot attempts already have been made. It may be expected that all the states will introduce some form of formula funding in the coming years. Therefore, in Germany, the committee of education ministers (Kultusministerkonferenz) installed a working group to investigate the possibility of introducing some form of formula funding. It was felt that, especially where the teaching budget is concerned, the German universities were not in an 'equal' position. The investigations sought to arrive at proposals for making the teaching budget more dependent on variables connected to teaching. Variables such as teaching load, performance and innovation plans may be playing a role in this. First, the working group presented an overview of the current situation in the respective states (*Länder*) of Germany with regard to the issue of formula funding. It concluded that only four

states employed - to some (limited) extent - formula funding. These are Niedersachsen, Nordrhein-Westfalen, Rheinland-Pfalz, and Sachsen. These four states will be described briefly below.⁵ However, such formula-funds only concern funds for non-personnel expenditures. The salary budgets continue to be distributed outside of a formula; in fact, in their yearly financial reports and budgets, universities often do not even include personnel budgets into their overviews. This is due to the fact that personnel expenditures can almost not be influenced at all by the institutions themselves.

5.3.3.1 Niedersachsen

In Niedersachsen just under 1 per cent of the total higher education budget is allocated by means of a formula. This only concerns so-called supplementary (i.e. margin) funds for teaching and research, falling within two categories: means for teaching assistants (*Hilfskraftmittel*) and means for material goods (*Lehrmittel*). Apart from a constant amount of *Hilfskraftmittel*, the extra funds are allocated using the following weights:

	Hilfskraftmittel	Lehrmittel
students within normative course length	66.7%	50%
full professor positions (<i>Stellen</i>)	33.3%	
academic staff positions (<i>Stellen</i>)		50%

The normative length of the curriculum in Germany - the so-called *Fachstudiendauer* - is normally 3 to 4 years (6 to 8 semesters) for Fachhochschulen and 4 to 5 years for universities (usually 9 semesters). For the category of *Hilfskraftmittel* (teaching assistants) no further weighting scheme is in use, while for the category of *Lehrmittel* (teaching materials) the following differentiation is made:

students within Regelstudienzeit:	- humanities/social sciences	1
	- science	3
academic positions:	- humanities/social sciences	1
	- science/engineering	3

5.3.3.2 Nordrhein-Westfalen

In 1998, in Nordrhein-Westfalen 4.5 per cent of the higher education budget is allocated by means of a performance-oriented formula. Until 1992, supplementary funds for teaching and research were allocated on the basis of the number of academic staff positions and the number of students within the normative length of their programme (*Regelstudienzeit*). From 1993 onwards, other parameters and indicators were in use. For the 1993 budget, supplementary funds for universities and Fachhochschulen were distributed on the basis of the number of degrees (*Absolventen*). In 1994, a pool of funds was formed, to which each institution had to contribute 10 per cent of its core funds for teaching and research. Together with the supplementary funds, this pool was distributed on the basis of the number of degrees (*Absolventen*) per institution. In 1995, the 10 per cent contribution of each institution was doubled to 20 per cent. For that year, next to the number of graduates, also each institution's success in attracting research council funds

⁵ Sekretariat der Ständigen Konferenz der Kultusminister der Länder in der Bundesrepublik Deutschland, *Differenzierung der Mittelverteilung im Hochschulbereich*, October 1995.

(*Drittmittel*) and its number of PhD degrees (*Promotionen*) were taken into account. Therefore, through these additional parameters, the institutional research performance is playing a role in the distribution of state funds. *Drittmittel* include Research council funds, supplied by the German Research Council (the DFG), and research funds allocated by charitable foundations (e.g. the Volkswagen Stiftung, the Fritz Thyssen Stiftung and the Robert Bosch Stiftung).

For the 1996 budget, the institutional contribution to the 'pool' was raised further to 35 per cent of its core funds and two additional parameters were included, viz. the number of students in the first through fourth semester (the so-called *Grundstudium*) and the number of academic positions (*Stellen*). In 1998 the contribution to the pool was increased to 50 per cent of the core funds for teaching and research. The weighting of the parameters for universities and Fachhochschulen is in 1998 as follows:

	Universities	Fachhochschulen
Absolventen	35%	50%
Drittmittel	20%	10%
Promotionen	5%	-
Students in Grundstudium	20%	25%
Stellen	20%	15%

The number of graduates (Absolventen) is weighted by the time to degree (i.e. the actual duration of the student's education career), in such a way that graduates with a shorter time to degree receive a higher weight (up to 1.3) than those which take more time. Also a distinction in programmes and faculties is made: for graduates, PhD-degrees, students and academic positions the weighting is 2 : 4.5 : 4.5 for social sciences/humanities : science : engineering; it is 7 : 2 : 1 for *Drittmittel* in the corresponding faculties/departments.

5.3.3.3 Rheinland-Pfalz

In Rheinland-Pfalz 5.8 per cent of the higher education budget is allocated by means of a formula. In 1994, for the first time, funds for teaching and research were distributed on the basis of a formula that used the following parameters and weighting scheme:

students within Regelstudienzeit, plus graduates	45%
professor positions, plus 50% of other academic positions	20%
revenues from research councils and foundations (<i>Drittmittel</i>)	30%
<i>Habilitationen</i>	2.5%
PhD-degrees	2.5%

A *Habilitation* is a kind of additional degree (promotion; on the basis of research-work) after which a Ph-D degree holder qualifies for a professor position.

The number of students is not differentiated according to subject area. However, the number of students in Fachhochschulen is multiplied by 0.8. For the parameter 'academic positions', personnel in the categories medicine and engineering receive a weight of 1.5.

5.3.3.4 Sachsen

For the 1995 budget, in which 5.2 per cent is allocated by means of a formula, the state of Sachsen distributes non-personnel funds for teaching and research according to the following parameters:

number of academic positions	30%
number of students	40%
Drittmittel revenues	25%
PhD-degrees plus number of <i>Habilitationen</i>	5%

Presently the information on the fourth item is unavailable. For this, the number of students is substituted. No weighting with respect to subject area is made here, with the exception of the number of academic positions, for which the following scheme is relevant:

professors in science, engineering and veterinary science	2.0
professors in other academic subject categories	1.0
other academic positions	0.5

The allocation system in Sachsen is still under construction, though.

5.4 University income from other activities

5.4.1 Contract research and contract teaching

There is no reliable information available about contract teaching. It can be stated, however, that institutions of higher education do not earn much in the field of contract teaching. Academic research is funded by two mutually complementary financing instruments: on the one hand in their budgets for higher education, the *Länder* provide basic funding for staff, equipment and materials, which serves to cover teaching as well as the training of new academics and scientists. On the other hand individual academics and scientists receive supplementary funds from external sources for large-scale research projects and programmes. They have to apply for these funds, which predominantly come from public budgets (approximately 80 per cent) and which are granted for a limited period of time. The outside funds are provided by predominantly state-financed funding institutions (above all the *Deutsche Forschungsgemeinschaft*), federal and land ministries, foundations and funding societies, industry, associations and international organisations.

Outside funding to complement basic endowments is becoming increasingly important. In 1980, the basic funding for research and teaching was six times higher than the external funding. In 1990, the share of basic funding in total funding had decreased (four and a half times higher than external funding). By raising external funds, institutions of higher education have managed to mitigate, but not compensate for, the effects of their shortage of funds. Between 1970 and 1993,

the volume of external funding of higher education increased from 630 million DM to 3,355 million DM.

There is a tradition of raising private external funds for research activities at German universities. Annual income from private sector research funding came to about half a billion DM in 1993.

The balance between university research and research at non-higher education institutions is shifting more and more in favour of the latter. One of the main reasons for this development is that, in recent years, a large number of new non-higher education institutions have been set up in Germany.

5.4.2 Organisation and funding of medical training

The structure, curricula and examination requirements for degree programmes in medicine, dentistry and veterinary medicine are uniformly defined country-wide on the basis of state regulations governing the licensing of physicians (*Approbatiousordnungen*). The degree programmes are concluded with degree examinations in medicine, dentistry or veterinary medicine.

Passing the degree examination in medicine, dentistry or veterinary medicine does not immediately entitle the holder to work as a physician, dentist or veterinarian. The right to work in these professions is acquired through licensing (*Approbation*) carried out by the responsible health authorities in the *Länder*. It is only after completion of a period of practical training that the professional designations *Arzt* (physician), *Zahnarzt* (dentist), or *Tierarzt* (veterinarian) may be used.

The doctorate in medicine is not awarded on passing the State Medical Examination. Instead, a supplementary doctoral procedure must be gone through at a university and a doctoral thesis written.

Medical training consists of:

- at least six years of medical studies;
- an 18-month period of practical training (*Arzt im Praktikum*);
- first aid training;
- a two-month period of nursing practicum;
- the following examinations: the preliminary examination in medicine (*Ärztliche Vorprüfung*) and the degree in medicine (*Ärztliche Prüfung*), which has to be taken in three stages.

University hospitals have to fulfill three tasks:

1. medical treatment of patients;
2. teaching of medical students;
3. medical research.

In table 5.4, total expenditure of universities and academic hospitals is presented, whereas in table 5.5 the income from medical treatments (*Verwaltungseinnahmen*) as a proportion of total and current expenditure is shown. On the basis of the figures of table 5.5, it can be estimated that

expenditure on medical teaching and research constitutes about 30% of total current expenditure of German academic hospitals.

Table 5.4: Expenditure of German universities and academic hospitals (in million DM)

	1980	1985	1990	1991	1992	1993
Universities without academic hospitals	8311	10181	13106	16453	17692	18395
Academic hospitals	7215	9675	13152	16450	18472	19868
Total	15526	19856	26258	32903	36164	38263

Note: From 1991 on former GDR included.

Source: Statistisches Bundesamt, Finanzen der Hochschulen 1993.

Table 5.5: Expenditure and allowances for medical treatments of German academic hospitals (in million DM)

	total expenditure	Verwaltungs- einnahmen	Verw. Einnahmen as a % of total exp.	Current expenditure	Verw. einnahmen as a % of current exp.
1992	18472	11600	63%	16977	68%
1993	19868	12874	65%	18504	70%

Source: Statistisches Bundesamt, Finanzen der Hochschulen.

5.5 Issues indirectly related to funding

5.5.1 Staff issues

5.5.1.1 Characteristics of staff employed

The provision of positions for scientific personnel in higher education institutions did not keep pace with the growing student numbers. The student-staff ratio increased considerably for the university and arts/music colleges sectors (from 9:1 in 1965 to 16:1 in 1989 and 23:1 in 1996), while the change in the ratio in the *Fachhochschul*-sector appears to be of even higher (from 16:1 in 1970 to 37:1 in 1989).

The student-staff ratio is not used for funding higher education, it only reflects how the institutions have in fact been funded and staffed (see table 5.6) in a specific year in relation to their student enrolment. For looking at this condition, sometimes use is made of an official ratio or parameter, the *Curricularnormwert*, which indicates the hours per semester and week an individual teaching staff member is supposed to commit per individual student (varying between subject groups). This key parameter is used to assess the difference between the supply of student places (based on the teaching staff available) and the actual student demand. This relationship is important for the decision whether admission to a subject is administered at the central admission office (applying a numerus clausus or the distribution mechanism) or decentral level at the individual institutions. It is also used to determine the capacity of an institution.

Table 5.6: University staff at German universities (headcount; x 1,000)¹

	Academic	Non-academic	Total ²	Student-staff ratio ³
1992	152	236	408	24.7
1993	153	237	415	24.7
1994	155	235	418	24.1
1995	160	239	428	23.2
1996	162	237	425	22.9

1 Without Gesamthochschulen and arts and music colleges.

2: Research assistants included.

3: Based on 33.2% of total time of academic staff spent on teaching (see section 5.5.1.2).

Source: Statistisches Bundesamt, Personal an Hochschulen 1996.

In table 5.7, it is shown that during the period 1992-1996 approximately 60% of total staff of institutes of higher education worked on a full-time basis. Table 5.8 makes clear that one fourth of the full-time academic staff employed holds the rank of professor.

Table 5.7: Full-time and part-time staff (in %) at all institutes of higher education

	Full-time staff	Part-time staff	Total
1992	63%	37%	100%
1993	61%	39%	100%
1994	60%	40%	100%
1995	61%	39%	100%
1996	61%	39%	100%

Source: Based on figures of the Statistisches Bundesamt, Personal an Hochschulen 1996.

Table 5.8: Distribution of full-time academic staff by function (in %)

	Professors	Senior lecturers	Lecturers	Other grades	Total
1992	24%	15%	56%	5%	100%
1993	25%	13%	58%	4%	100%
1994	25%	10%	61%	4%	100%
1995	25%	11%	61%	4%	100%
1996	24%	10%	61%	4%	100%

Source: Based on figures of the Statistisches Bundesamt, Personal an Hochschulen 1996.

5.5.1.2 Academic staff by type of activity

One of the results of an international comparative study on the academic profession concerned the time spent by academic staff on activities like teaching, research, administration, services and other activities (Enders and Teichler, 1995). The study presented detailed information for specific groups of academics. The time spent on the different activities was separated for the period when classes are in session and for periods when classes are out of session. In table 5.9, data for the academic staff in Germany are given.

Table 5.9: Percentage of time of academic staff spent on different activities

teaching		research		service/administration	
term	no classes	term	no classes	term	no classes
30	15	44	59	26	26

Source: Enders and Teichler, 1995.

It can be concluded that German academic staff on average spends most of its time on research, particularly during periods when no classes are given. If all other activities, apart from teaching and research, are attributed to teaching and research, and term time, respectively non-term time activities, are multiplied by 7/11 and 4/11 (taking account of respective duration), we can estimate that academic staff on average spends 33 per cent of its time on teaching and 67 per cent on research.

5.5.2 Student related issues

5.5.2.1 Student choice and institutional funding

It was stated in section 5.3.1 that the amount of funding (*Grundmittel*) a university receives (in general) is not influenced by its actual number of students. However, in a few *Länder* a very limited part of the basic funding is allocated on the basis of a formula in which the number of students is one of the elements (see section 5.3.3).

5.5.2.2 Tuition fees

In German higher education, normally no tuition fees are charged. However, since 1997/98, in some *Länder*, students who exceed certain enrolment periods have to pay a fee of DM 1000 per semester. This was done in response to the debate (since 1995) on restructuring the funding of higher education in Germany. In this debate it was suggested to introduce tuition fees in order to be able to generate means for the ever increasing number of students. This debate is not finished yet. Both those in favour of tuition fees and the opponents use fundamental arguments for and against the introduction of fees. Even the Ministers of Education of the different *Länder* do not agree on the issue.

Although German students do not have to pay tuition fees, they have to pay an annual *Sozialbeiträge* of DM 100 - 200. This is used for the activities of *Das Deutsche Studentenwerk*.

5.5.2.3 Access, selection and student support

Article 12 of the German Constitution states that higher education provides open admission for people who made their *Abitur*. However, some subjects have entrance restrictions because of the large number of applications in relation to the available study places in the programmes concerned. In these cases, the student places available are assigned by two national selection procedures. One for study programmes in medicine, veterinary studies and dentistry, and one system for other studies with a limited number of places. Limits on access are only allowed if: 1) the restrictions are absolutely necessary because the capacity is fully used; 2) the selection procedures have to be based on objective criteria; and 3) all students with an *Abitur* must be given

a fair chance. In addition, preferences concerning the university have to be honoured. Numerus clausus arrangements are anchored by law and do not fall under the authority of the institutions, nevertheless institutions may add some additional arrangements. The selection mechanisms of the different Länder are attuned to each other.

When the demand exceeds the supply of study places, 60% of the places are divided on the basis of the candidates' average grade. The other 40% of the places is reserved for candidates who have waited the longest period of time.

The German system of student financial aid is divided into direct and indirect parts. A limited group of students (25%), receives direct support through the Bundesausbildungsförderungsgesetz (BAföG), which is provided on a 50% grant 50% loan basis. Eligibility for BAföG and the amount to which one is entitled depends on parental income. The maximum amount of BAföG depends on the residential status of students. Students living with their parents may receive at maximum DM 670 per month and independent students are monthly granted a maximum amount of DM 905 (this is including a rent-surcharge of maximum DM 310). These maximum amounts can be upgraded by DM 80 per month if a student has a private health insurance. German students do not have to meet study progress demands except that they have to pass a *Zwischenprüfung* after two years of study in order to stay eligible for student aid (BAföG).

Next to that, the parents of all students may benefit from child allowances (about DM 250 per month) and education allowances (DM 200 per month for students living with their parents and DM 350 for independent students). For about 5% of the students tax deductions through the *Kinderfreibetrag* are beneficial. Because the child allowances are reduced with the amount received as *Kinderfreibetrag*, only students from families with an taxable income of DM 170.000 or higher gain from it. In addition, a very selective group of students (only a small percentage of the total student population) may receive a scholarship on the basis of academic achievement (*Begabtenförderung*). Furthermore, students may benefit from cheap housing and meals through student facilities (Das Deutsche Studentenwerk).

5.5.3 Quality assessment

Quality assurance in Germany is a responsibility of the individual federal states (Länder). Apart from a few activities by higher education institutions on their own (especially the Nordverbund of universities) that involve assessing study programmes, only two states developed significant initiatives with respect to quality assurance. In the most populous state, Northrhine-Westfalia, initiatives have been taken to improve the quality of teaching in the first half of the 1990s, but — partly due to opposition of the higher education institutions against the rather direct involvement of government and students without a proper role for the higher education institutions — these did not develop into a quality assurance system.

Only Lower Saxony has introduced a full-fledged procedure of internal and external quality assessment. Based explicitly on the Dutch experiences, it involves 'horizontal' assessments of study programmes across all higher education institutions in the state, co-ordinated by an independent Central Quality Assessment Agency. The external visiting teams that are part of this procedure are composed mainly of academics but include representatives of other stakeholders, especially someone who can assess the quality of higher education with regard to the labour market; also the visiting teams should consider the inclusion of a student or a graduate student.