

NATIONAL REPORT OF GERMANY

for the OECD/IMHE-HEFCE project on financial
management and governance of higher education
institutions



BAYERISCHES STAATSWINSTITUT
FÜR HOCHSCHULFORSCHUNG
UND HOCHSCHULPLANUNG



MÜNCHEN

Impressum

© Bayerisches Staatsinstitut für Hochschulforschung und Hochschulplanung,
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Umschlagentwurf und Layout: Bickel und Justus, München

Das Bild zeigt das historische Gebäude in der Prinzregentenstraße 24, in dem das Staatsinstitut für Hochschulforschung und Hochschulplanung seit 1994 untergebracht ist.

Herstellung: Dr. Ulrich Scharmer, München

Druck: Steinmeier, Nördlingen

München, 2004

ISBN 3-927044-51-2

LYDIA HARTWIG

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MONOGRAPHIEN: NEUE FOLGE, BAND 69
MÜNCHEN 2004

Vorwort

Die staatliche Finanzierung der Hochschulen befindet sich in vielen Ländern in einer Phase des Umbruchs. An die Stelle staatlicher Detailsteuerung tritt zunehmend eine stärkere Finanzautonomie der Hochschulen, die auf der anderen Seite die Entwicklung und den Einsatz geeigneter Steuerungsinstrumente erforderlich macht. Hierbei werden in den einzelnen Staaten unterschiedliche Wege eingeschlagen.

Dies war der Anlass für eine internationale Vergleichsstudie zu Hochschulfinanzierung und -steuerung, die unter Federführung des OECD-Programms für Institutional Management in Higher Education (IMHE) in Zusammenarbeit mit dem Higher Education Funding Council for England (HEFCE) in den Jahren 2002/2003 durchgeführt wurde. Die teilnehmenden Staaten waren Australien, Deutschland, Großbritannien, Irland, Japan, Niederlande, Schweden und USA. Das Bayerische Staatsinstitut für Hochschulforschung und Hochschulplanung beteiligte sich an dem Projekt für die deutsche Seite mit Zustimmung des Hochschulausschusses der Kultusministerkonferenz.

Wesentlicher Bestandteil der internationalen Vergleichsstudie sind die Berichte der teilnehmenden Staaten. Die Autorin des deutschen Berichts orientierte sich bei der Ausarbeitung 2002/2003 an Vorgaben, die einen einheitlichen Aufbau und eine gewisse Vergleichbarkeit der einzelnen nationalen Berichte ermöglichen sollen. Da in Deutschland, anders als in vielen anderen Staaten, die Länder Träger der Hochschulen sind und für ihre finanzielle Ausstattung Sorge tragen, wurden exemplarisch Darstellungen von sechs Universitätskanzlern integriert, welche die Vielfalt der Finanzierungs- und Steuerungsmodelle in den verschiedenen Ländern der Bundesrepublik Deutschland deutlich machen.

Der internationale Bericht wird unter dem Titel „On the Edge: Securing a sustainable future for higher education“ im Jahr 2004 von der OECD veröffentlicht.

Professor Dr. Hans-Ulrich Küpper

Preface

In many countries, state funding of higher education institutions is in a phase of change. Centralised financial governance and management is being increasingly replaced with financial autonomy of higher education institutions, which on the other hand calls for the application of appropriate management instruments. In doing so, the single states have chosen different paths.

This was the starting point for launching an international comparative study on financial management and governance of higher education institutions, which was carried out by the OECD Programme on Institutional Management in Higher Education (IMHE) in cooperation with the Higher Education Funding Council for England (HEFCE). The following countries participated in the project: Australia, England, Germany, Ireland, Japan, Netherlands, Sweden, and USA. The Bavarian State Institute for Higher Education Research and Planning participated in this project upon approval by the Higher Education Board of the Standing Conference of the Ministers of Education and Cultural Affairs of Germany.

The national reports of the states participating in the project are integral parts of the international comparative report. While composing the national report of Germany, the author adhered to a standard format, in order to facilitate comparisons. As the higher education system in Germany is, in principle, a matter that the Länder are responsible for autonomously, the reports of six university chancellors were incorporated, in order to show the diversity of financial management in Germany and to give examples of best practice.

The international Report will be published by OECD entitled "On the Edge: Securing a sustainable future for higher education" in 2004.

Professor Dr. Hans-Ulrich Küpper

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1 Constitutional positions

1.1 Legislative framework and structure of the higher education sector

According to the Constitution (Basic Law) the higher education system in Germany is, in principle, a matter that the **Länder are responsible for autonomously** (principle of state sovereignty in cultural affairs). Their higher education policy is coordinated by the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany.

The reconstruction of the higher education system after the Second World War was a matter of the *Länder*. When the **expansion of higher education** made national planning more and more imperative and, at the same time, financial requirements began to exceed the means of the individual *Länder*, the Federal Government (*Bundesregierung*) became increasingly involved in matters of higher education. In 1969, the expansion and construction of higher education institutions including university clinics and the funding of research activities were incorporated in the Basic Law. These "joint tasks" are funded fifty per cent by *Bund* and *Länder* (cp. 1.3).

Furthermore, the Federal Government was empowered to enact framework legislation concerning the general principles of higher education. In 1976, the **Framework Act for Higher Education** (HRG) was adopted and has undergone several revisions since then. After the peaceful revolution in the German Democratic Republic in 1989, the formerly centralised academic system in Eastern Germany was restructured and transferred to the western pluralistic system following the recommendations of the Science Council who was assigned to conduct a comprehensive survey. In 2002, the HRG enacted junior professorships aimed at independent scientific work and a more performance-based pay.

The legal position of the higher education institutions, their financing as well as the government means to influence und monitor them are regulated by the respective **Higher Education Acts of the Länder**.

As per 1999, Germany had a total of **345 state maintained or state recognized institutions of higher education** which are of different profiles and of different quantitative importance¹:

¹ The term "higher education institutions" encompassing all types of institutions *is used in this report*.

- **Universities and equivalent institutions** of higher education (including technical universities, comprehensive universities, teacher training colleges, theological colleges et al.)
- **Colleges of art and music**
- **Universities of applied sciences** (*Fachhochschulen*) incl. *Fachhochschulen* for Public Administration

In contrast to other states, e.g. the United States, private higher education institutions do not play a significant role in Germany, and they are not part of this report. The following table provides a quantitative overall view of the higher education system in Germany. It also shows the high diversity of the higher education sector and the differences across the *Länder*.

State, state recognized and non-state higher education institutions according to types of institutions and according to Länder in Germany 1999

Federal state (Land)	Number of higher education institutions				Number of students winter semester 1999/2000			Expenditure of public budget for higher education institutions (in million DM)
	total	Universities	Fachhochschulen ¹⁾	others ²⁾	total	Universities	Fachhochschulen	
Baden-Württemberg	62	12	35	15	189 155	128 248	56 867	7 201
Bayern	40	12	19	9	210 774	152 051	55 812	7 890
Berlin	16	4	8	4	133 124	103 208	24 428	4 281
Brandenburg	11	3	7	1	30 099	19 896	9 620	671
Bremen	5	1	3	1	26 116	17 899	7 514	466
Hamburg	10	4	4	2	65 115	47 229	15 931	1 886
Hessen	28	5	16	7	149 046	106 901	40 790	3 932
Mecklenburg-Vorpommern	7	2	4	1	25 830	17 825	7 562	1 335
Niedersachsen	27	11	14	2	143 307	103 634	37 613	3 938
Nordrhein-Westfalen	52	16	24	12	506 510	403 534	97 586	10 333
Rheinland-Pfalz	20	6	12	2	80 582	56 548	24 034	1 993

Federal state (Land)	Number of higher education institutions				Number of students winter semester 1999/2000			Expenditure of public budget for higher educa- tion institu- tions (in mil- lion DM)
	total	Uni- versi- ties	Fach- hoch- schu- len ¹⁾	others ²⁾	total	Universi- ties	Fach- hoch- schulen	
Saarland	6	1	3	2	20 396	16 831	2 983	889
Sachsen	24	6	12	6	80 171	55 535	22 172	3 023
Sachsen- Anhalt	11	2	6	3	35 456	20 788	13 777	1 924
Schleswig- Holstein	13	3	9	1	41 486	24 411	16 668	1 768
Thüringen	13	5	6	2	36 299	26 196	9 311	1 363
total	345	93	182	70	1 773 466	1 300 734	442 668	52 893

¹⁾ including Fachhochschulen for Public Administration

²⁾ Colleges of Art and Music, Theological Colleges and Teacher Training Colleges as well as Comprehensive Universities

Sources:

Bundesministerium für Bildung und Forschung: Grund- und Strukturdaten 2000/2001, Bonn 2001

Statistisches Bundesamt: Bildung im Zahlenspiegel, Stuttgart 2001

In addition, there are 35 colleges of advanced vocational studies (*Berufsakademien*) either publicly or privately maintained which combine academic training at a higher education institution with practical training in the workplace.

Solely universities and equivalent institutions of higher education have the right to award the doctorate (*Promotion*) and a post-doctoral qualification to teach in higher education (*Habilitation*). Research (particularly basic research) and the promotion of junior academics are also **distinctive features of universities** and equivalent institutions of higher education. The characteristic features of *Fachhochschulen* are the particular emphasis on practice in research and teaching and the integration of one or two practical semesters spent outside the institutions to gain practical experience.

An alternative to attending a higher education institution in person are distance studies which are offered by the university for distance studies in Hagen, but private institutions and state universities also engage increasingly in distance learning.

1.2 Formal relationships between governments and higher education institutions

In the *Länder*, the legal position of the universities is regulated the same way: They are incorporated in the state administration as **public corporations** (this particularly concerns budget, economic and staff matters). In matters of research and teaching they are free and have the right to **self-administration and self-management (institutional autonomy)**. Their annual budgets form part of the *Länder* budgets which are adopted by the respective *Länder* parliaments.

In all *Länder*, the higher education institutions are subject to the legal and state supervision of the respective ministry. Legal supervision (*Rechtsaufsicht*) encompasses that the laws are adhered to. State supervision (*Fachaufsicht*) includes first of all economic, budgetary and financial management as well as staff affairs.

The *Länder* retain the strategic overall responsibility for the higher education sector. Against this background the state governance of higher education institutions can be described as follows:

- The state sets the legal framework conditions.
- The state provides the higher education institutions with the necessary funds.
- The state provides the higher education institutions with the prerequisites of a modern and efficient infrastructure.

None of the *Länder* does without governmental supervision of higher education institutions – but increasingly, it is being placed on a new foundation. Since one basic idea of the current reforms is to decentralise as many decisions as possible, i.e. to leave them up to the universities themselves, financial and organisational competences are, above all, being given to them.

Access to universities is, in principle, open to all those who have been awarded the general higher education entrance qualification (*Allgemeine Hochschulreife – Abitur*) which is normally obtained after 12 or 13 ascending school years. Admission to a university of applied sciences can be obtained by other entrance qualifications and also by taking certain courses of vocational education at upper secondary level. For the majority of courses of study there are no nationwide restrictions on the number of applicants to be admitted. This ensures that everyone can exercise his right of free choice of occupation, job and place of training as guaranteed in the Basic Law.

In some courses (e. g. medicine, veterinary medicine, dentistry, psychology, and business management) there are **nationwide quotas** due to the large numbers of applicants and the insufficient number of equivalent study places available. Places for these courses of study are awarded by the Central Office for the Allocation of Study Places (*Zentralstelle für die Vergabe von Studienplätzen*) on the basis of a general selection procedure based on the applicant's average mark in the *Abitur*, the waiting period and social criteria. Besides, there are **local restrictions on admission** to a number of courses not included in the national admission procedure which are administered by the higher education institutions themselves. Conditions of admission are considerably changing at present. By and by, higher education institutions are granted the right to select their students and thus achieve more options to decide on admission procedures.

Courses and curricula are developed and monitored by the institutions. Studies in medicine, pharmacy, law, and teacher education are completed with state examinations (*Staatsprüfungen*) which are administered by the relevant ministries. The examination regulations for higher education examinations leading to the degrees of *Diplom* and *Magister* have to be state-approved whereas study regulations (*Studienordnungen*) must be announced to the ministries. For the new Bachelor's and Master's study courses an **accreditation** procedure has been set up with regard to quality assurance via peer review.

1.3 Funding

The great majority of funding for higher education and student maintenance is provided from **public sources** (cp. 1.1). As the institutions of higher education are public institutions of the *Länder*, consequently, their current expenditure for research and teaching (salaries, material and operating costs) are being primarily funded through the ***Länder* budgets**.

Costs for larger investments such as buildings and large-scale scientific equipment are shared between *Bund* and *Länder* to fifty per cent as part of the **joint task of construction in higher education**. Funding decisions require the recommendations of the Science Council (cp. 2).

Another joint task in the field of higher education refers to the **joint funding of research**. This applies to the large sector of extra-university research² and to the central public funding organisation for academic research in Germany, the *Deutsche Forschungsgemeinschaft (DFG)*. The DFG is the main source of research funds for universities in particular³. The allocation of research funds is based on a widely accepted peer review system for all project grant applications.

The higher education sector in Germany has expanded strongly since the 1970s. Despite the enormous growth in enrolment, public expenditure (in real prices) did not keep pace. In a political initiative of the heads of government of *Bund* and *Länder* in 1977 it was decided that, despite insufficient capacities, admission to higher education institutions should generally be kept open for the subsequent years because of high birth rates in the past. From 1980 to 1990, the number of first year students increased from 189 963 up to 277 868 and up to 290 983 in 1999.⁴ In the same period (1980 to 1999), the number of positions for academic staff at universities increased from 67 107 up to 100 512 and at the *Fachhochschulen* from 9 426 up to 15 861.⁵

In 1999, the total expenditure of all higher education institutions (including university hospitals) amounted to 52 894 million DM compared to 48 888 in 1995.⁶ The expenditure is classified in basic subsidies (*Grundmittel*), additional research grants (*Drittmittel*) and income from management and commercial activities (*Verwaltungseinnahmen*) – the latter refers mainly to revenue obtained from university hospitals by medical care.

² In 1999, the proportion of the total expenditure for research and development amounted to 56.2% at the higher education institutions and to 43.8% at the extra-university research institutions (*Max-Planck-Institute* 7.2%, *Fraunhofer-Institute* 5.1%, *Helmholtz-Zentren* 16.7%, *Blaue-Liste-Einrichtungen* 5.4%, *Bundeseinrichtungen mit Ressortforschungsaufgaben* 4.7%, *Länder and communal institutions* 4.7%). Cp. Wissenschaftsrat: *Eckdaten und Kennzahlen zur Lage der Hochschulen von 1980 bis 2000*, p.62 et sq. <http://www.wissenschaftsrat.de/texte/5125-02.pdf>

³ The DFG budget totalled about 1 205 million Euros in 2001. About 700 million Euros were provided by the *Bund*, 500 million Euros by the *Länder* and 5 million Euros by other institutions. Cp. http://www.dfg.de/dfg_im_profil/zahlen_und_fakten/

⁴ Wissenschaftsrat: *Eckdaten und Kennzahlen zur Lage der Hochschulen von 1980 bis 2000*, <http://www.wissenschaftsrat.de/texte/5125-02.pdf>, p.8 sq.

⁵ *ibid.*, p.50–53.

⁶ *ibid.*, p.58–61. The year 1995 is the first year that includes the higher education sector in Eastern Germany.

In 1999, the expenditure of all higher education institutions according to the different types mounted up to: 22 526 million Euros at the universities (without departments of medicine), 24 054 million Euros at the departments of medicine and university hospitals, 5 008 million Euros at the *Fachhochschulen*, 466 million Euros at the *Fachhochschulen* for Public Administration and 839 million Euros at the colleges of art and music.

Students pay **no tuition fees** for their first course of study with the exception of "long-term"-students who have far exceeded the standard period of study (only in some of the *Länder*) and students at the very few private institutions. There is a public debate about the introduction of study fees in Germany. However, a couple of problems like the build-up of a compensatory assistance system have not been solved yet.

Financial assistance for students is provided through the Federal Training Assistance Act (*Bundesausbildungsförderungsgesetz*) which is jointly financed by the *Bund* (65%) and the *Länder* (35%). All students can apply for financial aid of this type provided their parent's income is below a certain level. Assistance is split evenly into grant and repayable loan components.

1.4 Institutional governance and management

According to the basic principle of the **institutional autonomy**, the institutions of higher education have the right to self-governance. In addition to financing higher education, the *Länder* set the legal framework for this institutional self-governance.

Higher education institutions are governed by a full-time head, a **president** or a **rector**. This function may also be carried out by an elected **presidential committee** consisting of the president, the vice presidents and the **chancellor** (chief administrator) ex officio. The chancellor takes care of the administrative matters of the institution as a whole and is in particular responsible for the budget.

According to the tradition of corporate governance, there are **collegial bodies** at different levels of the institutions that have the right to participate in academic matters (senate and assembly at central level and department councils at decentral level).

In the past decade, the political awareness grew that, besides the autonomy in academic matters, autonomy with respect to the internal form of organisation and the use of financial resources is vital to improve the effectiveness and competitive ability of

higher education institutions.⁷ This implies a management that is competent and capable to make decisions. A turning point to a more **professional institutional management** is characterised by the following reforms which have taken place in recent years:

- At central level: implementation of a cooperative university management (presidential committee) with different departments (e.g. for research, teaching, international affairs ...) under the responsibility of vice presidents (vice rectors) and strengthening of the management,
- Limitation of functions of the senate to matters of principle and largely shifting of decision-making authority from the senate to the presidential committee,
- Introduction of higher education boards with mainly advisory competences (composed of external experts of high public standing from higher education institutions, research and economy),
- Change of the employment status of the chancellor from an appointment of life into a term of office of eight years in most of the *Länder*,
- At department level: longer terms of office for the deans and strengthening of their responsibilities against the collegial bodies by limiting their tasks to matters of principle and a clear assignment between executive and monitoring functions.

The basic organisational units of the institutions are departments which are aligned with the traditional structuring of subjects. As research often requires cross-border cooperation of subjects and methods, new structures across the traditional structuring like in-house research areas or the collaborative research centres of the DFG are built up.

1.5 Staffing and asset ownership

According to the legal position of universities and other higher education institutions (cp. 1.2) the **staffing scheme** is part of the *Länder* budget. Recently, some flexibility has been granted. This varies from Land to Land and will be described in chapter 3. The salaries are fixed by collective agreements and do not differ within the public service.

⁷ KMK: Hochschulen und Hochschulpolitik vor neuen Herausforderungen, Beschluss der KMK vom 28.2.1997, p. 9–11.

Under the Framework Act for Higher Education, full-time academic staff can be divided up into the following groups: professors, scientific and creative arts assistants, senior assistants and senior engineers, lecturers, scientific and creative arts staff, teaching staff for special tasks.⁸

The great majority of academic staff are appointed as employees. **Civil servants** only form a limited part of the academic staff in universities and other higher education institutions. Professors are usually appointed by the ministry responsible for science in the particular *Land* as civil servants (sometimes at first with limited and then with unlimited tenure). Some *Länder* have assigned all responsibilities in staffing matters to the higher education institutions (cp. 3).

Higher education institutions in Germany generally do not own **property**. Land and buildings belong to the respective *Länder* which are, in return, responsible for maintenance expense. Merely the operating of the buildings is budgeted and administered by the institutions. Some new steps to more autonomy of higher education institutions in this field will be explained in chapter 3 (Niedersachsen, Rheinland-Pfalz). Investment in construction and reconstruction above a threshold of 1.5 million Euros is financed jointly by *Bund* and *Länder* (cp. 1.2).

2 Current policy context

A number of actors at the central and regional level are concerned with policy directions and implementation. *Bund* and *Länder* act jointly in a system that serves to bring together a wide array of interests within and outside governments. The **Standing Conference of the Ministers of Education and Cultural Affairs (KMK)**⁹ is the federation and coordinating body of the *Länder* ministers responsible for education, higher education, research and cultural affairs based on an agreement of the *Länder*. The **Bund Länder Commission for Educational Planning and Research Promotion (BLK)**¹⁰ is the forum for the discussion of all questions of education and research promotion which are of

⁸ For recruitment requirements, duties and status of staff cp: The education system in the federal republic of Germany 2001, p. 208 et sq. <http://www.kmk.org.doku.home1/htm>. For trends and figures cp. Wissenschaftsrat, Eckdaten und Kennzahlen zur Lage der Hochschulen, <http://www.wissenschaftsrat.de/texte/5125-02.pdf>, p. 50–57.

⁹ <http://www.kmk.org>

¹⁰ <http://www.blk-bonn.de>

common interest to the Bund and the *Länder* governments. The **Science Council**¹¹ is the main policy advisory body that assembles scientists and representatives of public life as well as representatives of the Bund and the *Länder* governments. Its function is to draw up recommendations on the development of higher education institutions and the research sector, as well as on the construction of new universities. The **Conference of Rectors (HRK)**¹² is the association of state and state-recognised universities and *Fachhochschulen* in Germany that represents the interests of the higher education institutions.

2.1 Position of higher education within the national and regional economy

Higher education institutions have a central role within the modern **knowledge society** to identify political, social, economical, environmental and cultural needs and to solve corresponding problems. They create and impart new knowledge. Thus, they are an important factor to preserve and increase the welfare of society and to save its basis of life.¹³

Higher education institutions foster the **cooperation with economy** since decades – especially in disciplines like engineering, natural and economic science –, and their development inside and outside the institutions is largely enhanced by economic and practical questions. A close cooperation between higher education institutions and economy is considered to be an essential support of coping with the structural changes in economy and to improve the development of German economy within worldwide competition.

The key role of higher education institutions for the knowledge society and economy is linked with the fields of **research, teaching and learning** as well as **regional and local development**.

- Regarding **research**, higher education institutions provide a substantial contribution to the advancement of science which is a basic requirement to solve diverse problems of modern society, and a central location factor in worldwide economic competition. Knowledge and expertise developed by universities can flow to industry via direct cooperations within the context of research and development projects, via the licensing of university intellectual property, and via spin-off and start-up companies.

¹¹ <http://www.wissenschaftsrat.de>

¹² <http://www.hrk.de>

¹³ KMK-Positionspapier "Hochschule und Gesellschaft", Beschluss der Kultusministerkonferenz vom 5.12.2002, <http://www.kmk.org/doc/beschl/hoschulges.pdf>

- With respect to **teaching and learning**, higher education institutions perform an important task to offer professional qualification in the face of increasing demands from the economy and the labour market in times of globalisation. Another important task is the training and promotion of junior academics.
- Furthermore, higher education institutions are considered as an important factor for developing **regional profiles**. Research collaboration and transfer of technology are of mutual benefit: business and industrial enterprises are recruiting specialists and know-how from higher education institutions and higher education institutions on their part can extract new ideas from practical experience.

A strong connection between economic policy and higher education policy results from the fact that especially *Fachhochschulen* have been proved capable to forward regional economy. A lot of *Fachhochschulen* refer to the training needs of regional economy, and they develop their courses in close contact with each other. Thus, the maintenance of a well-balanced higher education system within all regions is considered as an important political aim.

2.2 Current and future role in economic and social development

Like in other states, higher education institutions in Germany face **new challenges**:

- The post-industrial society is changing into a society where knowledge and information are becoming key factors for shaping the future conditions of life.
- The rapid creation of new knowledge in science is speeding up the changes occurring in economy and society.
- Increasing globalisation means that every sector in society has to face the challenge of worldwide competition.

As a result of this, the following tasks arise for the higher education system in particular: A region-wide **network of differentiated higher education institutions** has to satisfy the needs of economy and society in terms of academically trained young people. Top priority has to be given to developing new knowledge through research as well as disseminating and using this knowledge. Above all, the basic institutional conditions and the internal management structures of higher education institutions have to be modernised and amended so that they can compete successfully internationally.

The future of economy and society is depending decisively from a high standard of qualification. The report "The Future of Education and Labour" presented by the BLK to

the government heads of the Bund and Länder in 2002, points out that there will be a **demand for highly qualified employees** in the long run.¹⁴ On the other side the **demographic regression** will lead to a decline of young and to an increase of older people on the labour market within the next two decades. It is therefore essential to acquire a sufficient number of graduates to keep up with the development. To meet these requirements, more young people have to enter higher education and to acquire a degree.

About 90 per cent of the German population at the age of 15 to 19 has a **qualification** at secondary level.¹⁵ This includes the vocational sector characterised by a combination of vocational training and vocational school (dual system) which accounts for two thirds of these grades. The outstanding significance of the dual system in Germany has effects on the proportion of young people who enter higher education. The rate is considerably lower as compared to the average in the OECD of 45 per cent: In Germany, the rate of first year students increased from 19.5 per cent in 1980 up to 33.5 per cent in 2000.¹⁶

A specific policy aim of the *Bundesregierung* is to increase the proportion of higher education enrolments up to 40 per cent. To achieve this aim, the expansion of the range of courses and the volume of enrolments in the *Fachhochschulen* is to be increased. The introduction of the international accepted **Bachelor and Master** courses is to offer more degree programmes that can be completed in a shorter period of time and are able to react to the requirements of the labour market with its rapid changes. Financial assistance for students also serves to increase higher education.

2.3 Key financial issues and policy instruments

The central idea behind the reforms taking place in higher education in all the *Länder* is to strengthen the autonomy of higher education institutions and to give them a greater scope for the **management of their own resources**. As many decisions as possible should be made at decentral level.

¹⁴ Cp. Zukunft von Bildung und Arbeit. Perspektiven von Arbeitskräftebedarf und -angebot bis 2015, Bericht der Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung (BLK) an die Regierungschefs von Bund und Ländern, <http://www.blk-bonn.de/papers/heft104.pdf>

¹⁵ OECD: Education at a Glance, OECD Indicators 2002, table C5.1

¹⁶ Statistisches Bundesamt, Fachserie 11, Reihe 4.3.1, Bildung und Kultur, Nichtmonetäre hochschulstatistische Kennzahlen 1980–2000, p. 25, <http://www.destatis.de/allg/d/veroe/hoch/hochdow2.htm>.

In many *Länder* governmental financing of higher education institutions is undergoing radical changes. More than ten years after Reunification, *Bund* and *Länder* are facing huge financial problems. Universities have also felt this, since, like other state institutions, they too have been affected by recurring **budget cuts**. As a countermove to the increasing under-funding of the higher education system, the ministries and state parliaments withdrew from many areas of centralised governmental management. Instead, higher education institutions were increasingly given greater financial autonomy.

Already in 1994, the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany adopted "Eleven theses for the **financial autonomy** of higher education institutions"¹⁷ which asserted that university budgets should be equipped with a high degree of flexibility.

Meanwhile, the flexibility of the university budgets managed by way of cameralism has been pushed forward in most of the *Länder*, so that often there are only **little differences to lump sum budgets**. This refers mainly to the options which are opened by an easier budgetary system with a high degree of mutual coverage of budget items, the easing of the principle of annuality and free disposal of staff. More opportunities are opened by the disposition of accrued reserves and revenues.

On the other hand, the increased financial autonomy of higher education institutions requires the development and the use of suitable management instruments. New types of **reporting** are implemented, e.g. business-accountancy with a year-end financial statement, as well as controlling. In some *Länder*, **lump sum budgets** and methods of **formula-based financing** have been introduced after pilot attempts in the 90ties. Increasingly, methods to assess the budget on the basis of performance and capacity related fund allocation criteria as well as, in part, on target agreements are implemented. In doing so, the individual German *Länder* have taken different paths. This will be described in detail in chapter 3.

¹⁷ KMK: Differenzierung der Mittelverteilung im Hochschulbereich – Beschluss der Kultusministerkonferenz vom 26.1.1995, Anhang: "11 Thesen zur Stärkung der Finanzautonomie der Hochschulen".

3 Description of policy instruments

As the higher education system in Germany is, in principle, a matter that the *Länder* are responsible for autonomously, a detailed description of policy instruments has to be given at **level of the different *Länder***. The current information provided in chapter 3 is based on the reports given by six university chancellors.¹⁸ They speak for *Länder* with a fairly large and differentiated higher education system that have introduced new financial management instruments within the previous years. In all of them, policy in higher education is in a state of change. The following implementations reflect the situation in 2002.

All of the 16 *Länder* are allocating a greater or smaller part of the budget according to performance parameters. As all **parameter based models** lead to a considerable shifting within the higher education budgets, they have advantages and disadvantages for the different institutions. The introduction of new financial instruments has to be seen in context with the number of higher education institutions in each *Land*, their profile and size, the diversity of the sector and the financial power of the *Land*. The new funding models are often associated with higher education pacts resp. **frame-contracts**, sometimes supplemented by target agreements. They provide planning security usually in connection with cuts that have to be agreed on long-term. While introducing the new instruments, the *Länder* take into consideration other experiences and strategies. Modifications and further developments on the basis of the experiences gained are usually included.

3.1 Baden-Württemberg

3.1.1 Current policy context

The **University Law** of 1 February 2000¹⁹ brought along important innovations and scope for progress as well as essential **changes in management structures**. University boards with advisory functions and partly decision-making competences were newly introduced.

¹⁸ For this reason, the Bavarian State Institute for Higher Education and Planning organised a workshop on "New models of higher education financing and management" in April 2002. The chancellors' papers are published in full length in: Beiträge zur Hochschulforschung 3–2002 (Baden-Württemberg: Romana Gräfin vom Hagen, Heidelberg University; Bayern: Dr. Ludwig Kronthaler, Munich Technical University; Hessen: Bernd Höhmann, Marburg University; Niedersachsen: Günter Scholz, Hannover University; Nordrhein-Westfalen: Dr. Roland Kischkel, Dortmund University; Rheinland-Pfalz: Götz Scholz, Mainz University) http://www.ihf.bayern.de/fr_publicationen.htm

¹⁹ The following report refers to the universities as listed in the University Law.

Their field of action includes structure and development planning as well as construction planning and the principles for a formula based allocation of funds. The faculties were strengthened by expanding the minimum number of permanent positions for professors to 20 and by establishing a faculty executive board with a de facto full-time dean. Structural and development plans had to be submitted for the existing faculty structures. Regarding teaching, Bachelor and Master courses are to be introduced with the aim of reducing the duration of studies. *Baden-Württemberg* will also enlarge the higher education institutions' authority to select their applicants within a selection procedure determined and administered by the institutions themselves.

3.1.2 Description of policy instruments

The financial statute

The financial statute of the universities is laid down in the University Law. Income and expenses of the universities are estimated in special chapters within the state budget of *Baden-Württemberg*. Heidelberg was the first university to attain a **block grant budgeting**. Since 1999, the university has seven income items and ten expense items. University law also lays down that the universities have decentralised financial responsibility and are responsible for the use of positions and funds estimated in the state budget. The block grant budgeting does not comprise all appropriations for staff.

In return to the increased financial autonomy, suitable information and management instruments had to be introduced. The universities have committed themselves to introduce **cost and performance accounting** according to standardised principles. However, the basis remains the governmental accounting with its cash based accounting system. Universities that decide to give up this system can apply the accounting principles valid for **state companies** (*Landesbetriebe*) for their financial management. Heidelberg University is the first university in *Baden-Württemberg* to go over from governmental accounting to business accounting and to tender the accounts according to the regulations for state companies.

The Solidarity Pact

The **Solidarity Pact** signed on 18 March 1997 between the prime minister, the ministers of finance and of science and the rectors resp. presidents of all universities places the financing of *Baden-Württemberg's* universities on a legal basis for a period of ten years. The starting point for this was the realisation that the *Land* is forced to consolidate its budget and that, on the other hand, the universities need planning security.

On this basis it was determined that the amount of the budget from 1997 should at first remain unchanged from 1998 until 2001, meanwhile this has been extended until 2006. In this context it is important that the budget estimates for personnel expenditure are adjusted as they are in the rest of the state budget. On top of this the universities received 30 million DM per year for investments. The quid pro quo involved, in a first tranche, cutting 750 positions – spread over five years – where on average a sum of 100.000 DM per position had to be supplied. In the second five year period it is 750 positions again. A third of the funds for these 750 positions is converted into funds for non-personnel expenses which are left with the universities. The second third is to be mainly used for extension and structural projects in the *Fachhochschulen*. The remaining 250 positions are to be cut. The Solidarity Pact was an important political decision for *Baden-Württemberg's* universities. This **planning security** is rated highly.

Inter-university fund distribution

The original budget from 1997 reflects the distribution of funds between the universities that has grown historically. Since the year 2000, a formula-based allocation of funds which is supported by indicators comes on top of this. In lengthy negotiations between the ministries, the Rectors' Conference and the chancellors, a joint model has been worked out which was introduced in 2000 and which is currently undergoing a first revision. The model is made up of two components: one **quantity-orientated** part and one **incentive-orientated** part, with a cut limit of 1 % for both parts, i.e. the change in the allocation of funds for a university must not exceed or fall below 1%. In 2003, the cut limit amounted to 1,5%.

By applying the following indicators, the quantitative achievements are assessed in terms of the quantity-orientated part (comparison of the universities with each other):

- Number of students in their first to tenth semester,
- Number of graduates as an average of the last two years,
- Third-party funds related to the allocation of state funds,
- Level of acquired third-party funds,
- Number of doctorates as an average of the last two years.

In the second part, the incentive part, the development of the performance within the individual university is exclusively taken into account. The following indicators are used positively here:

- Improvement of the relationship between numbers of graduates to the numbers of students in the fourth and fifth semester (this assesses the proportion of student drop-outs),
- Decrease in the number of long-term students,
- Increase in the number of foreign students,
- Increase in the proportion of third-party funds per allocation,
- Increase in the proportion of female graduates,
- Increase in the proportion of doctorates and habilitations of women out of the total number of doctorates and habilitations,
- Increase in the proportion of female academic staff out of the total number of academic staff,
- Increase in the number of female professors.

With 24 % out of the incentive part the promotion of women is given a special weighting.

Two years of **experience** with inter-university fund allocation show that the classic universities are losing resources and that the technical universities are the winners. The reason for this is the weighting of third-party funds. In addition, the small universities are protected by a basic sum so that, partly, a reallocation occurs in their favour.

In the meantime, the government is planning a **further step**. A three stage model should be made up of basic resources according to the Solidarity Pact, inter-university fund allocation, and target agreements as a third stage. The subject of target agreements should be future changes and developments in particular.

3.2 Bayern

3.2.1 Current policy context

The reorganisation of the relationship between the state and the higher education institutions with the aim of increasing their autonomy was a matter of concern during the **reform of the Bavarian Higher Education Act** in 1998. The following changes have resulted:

- The management in all Bavarian higher education institutions was strengthened by the introduction of a **steering committee** (rectorate or presidential committee).
- The steering committee makes decisions on the funds and positions at the disposal of the institution. In doing so, the principles of the **performance and capacity based allocation of funds** as well as results from the **evaluation of research and teaching**

have to be taken into consideration. This is the basis for an allocation of funds more strongly orientated towards the overall objectives of the respective higher education institution and for developing a particular profile.

- The **chairman** of the steering committee provides initiatives for the development of the higher education institution and develops the main features of higher education policy. He consults the deans when fulfilling his duties.
- A further element of the new organisational structure of universities is the establishment of a **higher education board**. The board is to provide initiatives for developing the higher education institution's profile as well as for research and teaching foci and for developing the range of courses further.

In addition a number of responsibilities were transferred from the ministry to higher education institutions. Furthermore, legal organisational rules that differ from the law can be made for a single university. This so-called "**experimental clause**" enables higher education institutions to test new organisation models with the aim of improving efficiency. Munich Technical University has made use of this option extensively.

However, these rules do not mean that higher education institutions have total autonomy. *Bayern* wants to continue with shaping the general framework of the higher education system and to retain the **strategic overall responsibility**. Research and training are considered to be important economic location factors. Objectives and tasks for the coming years were worked out in the **higher education development planning** for Bavaria in 2001.²⁰ Development perspectives were evolved from the basis of the development plans of the individual higher education institutions and combined into a state-wide development plan by the Bavarian State Ministry of Sciences, Research and the Arts. Among the large number of strategic intentions for the forthcoming years that are defined within the development planning, the following aims apply to the framework of this national report:

- Enhancement of autonomy through **delegation of responsibilities** to the higher education institutions outside of the core of national planning responsibility,
- **Increase of competition** in and between higher education institutions by ensuring equal competitive conditions,
- **Improvement of efficiency** through a performance and capacity related allocation of financial resources.

²⁰ Landeshochschulentwicklungsplanung für den Freistaat Bayern, ed. Bayerisches Staatsministerium für Wissenschaft, Forschung und Kunst, <http://www.stmwfk.bayern.de/hochschule/lhsep.html>

3.2.2 Description of policy instruments

Integration of higher education institutions in the state budget

The Bavarian higher education institutions are integrated in the basic system of the state budget – with some special regulations. Funds which serve to maintain the operation and infrastructure of the higher education institutions have been combined in one budget. The budget items included in the budget are basically “mutually coverable”, i.e. the funds included there can also be used for expenses which are assigned to another budget item. Since 1998 important specific regulations for the higher education sector have gradually been extended:

- Possibility to transfer funds to the next fiscal year,
- Extension of mutual coverage of budget items (funds for teaching and research, investments, building maintenance),
- “Capitalisation” of the funds of unoccupied positions,
- Possibilities of a cost neutral conversion of positions,
- Loosening of commitments to the staffing plan concerning employees,
- Disposition of income earned by the universities,
- Interest calculation on income from third-party funds.

The field of building does not fall within the control of the higher education institutions. It is managed by the state building administration, whereas the funds for large building projects are solely run by the ministry (above one million Euros).

System of resource allocation among higher education institutions

Resources higher education institutions get in order to fulfil their duties can be classified as follows: facilities and their management, staff funds for science and administration, investments, continuous needs, funds for teaching and research. Apart from the target figures according to the Higher Education Construction Act there are no special rules for the allocation of resources for buildings, rooms and maintenance. The same applies to staff funds and capital investment (they have “grown historically”). For the allocation of the funds for teaching and research there are extensive parametric rules. The following explanations only apply to the proportion of funds for teaching and research. They are an important but only limited part of the budget.

Performance and capacity related allocation of funds for teaching and research

Since 1993 the Bavarian Higher Education Act has called for the number of students studying within the standard period of study and the number of graduates to be considered when allocating funds for teaching. According to the Bavarian Higher Education Act of 1998, the financing of universities is regulated as follows: The funds for teaching and research are allocated according to performance and capacity related criteria based on the number of professors, of academic and artistic staff and on the number of students within the standard period of study. Performance related criteria are in particular:

- Teaching results, particularly the number of graduates per course of study compared to the number of students within the standard period of study,
- Results within the framework of promoting junior academics as well as
- High performance in research including the subject-specific level of income from third-party funds.

Progress in fulfilling the principle of equal opportunities for women also has to be taken into consideration.

In accordance with the classification of the official statistics all the data were split up into five subject groups, in order to introduce subject-specific weighting coefficients which is supposed to take into account the different cost structure of individual subjects. In 2000, 40% of the funds for teaching and research were allocated to universities according to the model. Since its introduction the model has been continually reviewed and modified accordingly. Hence, the following distribution arises:

Model for the distribution of funds for teaching and research in Bayern

Funds for:	Assessment criteria	Proportion	Subject-specific weighting	
Basic resources	Positions for professors	20 %	1 : 2,5 (Humanities : Natural-/Engineering Sciences)	45% Capacity or student number criteria
	Positions for academic staff	5 %	1 : 2,5 (Humanities : Natural-/Engineering Sciences)	
Additional teaching resources	Students within the standard period of study (excluding students taking a second degree, students doing a doctorate)	20 %	1 : 2,5 (Humanities : Natural-/Engineering Sciences)	50% Performance criteria
	Graduates in relation to the students in the standard period of study	5 %	1 : 2,5 (Humanities : Natural-/Engineering Sciences)	
	Graduates weighted according to the duration of studies	18 %	1 : 2,5 (Humanities : Natural-/Engineering Sciences)	
Internationalisation	Humboldt scholarship holders	2 %	without weighting	50% Performance criteria
Additional research resources	Acquisition of third-party funds	20 %	5 : 2 : 1 (Humanities : Natural sciences : Engineering sciences)	
	Doctorates/Habilitations	5 %	1 : 2 (Humanities : Natural-/Engineering sciences)	
Fulfilling the equality mandate	Proportion of female professors	1 %	without weighting	5% Equality
	Proportion of female academic staff	2 %	without weighting	
	Proportion of women doing Doctorates/Habilitations	2 %	without weighting	

Evaluations

The instrument of cross-section evaluation is used effectively in *Bayern*. Structural surveys of disciplines are carried out by the Council for Science and Research set up as an advisory body of the Bavarian Minister of Sciences, Research and the Arts. The intention is to assess the present situation of a certain discipline regarding research and teaching and to give recommendations on the further development of structures and profiles in comparison with other universities at home and abroad. The assessments have led to important, qualitative and quantitative results which are being put into action.

Data Information Supply

In order to continuously supply all levels of the universities with the **relevant management data**, the Bavarian State Ministry of Sciences, Research and the Arts has commissioned the project "Computer-based Decision Support System for Bavarian higher education institutions" (CEUS^{HB}). Bamberg University and Munich Technical University were acting as pilot universities and pushed ahead the development of a hierarchically graded data-warehouse-system as the core of a decision-making and support system for the areas of academic studies and teaching as well as of personnel and fund management. CEUS^{HB} is being implemented step by step over the next three years at all Bavarian universities.

3.3 Hessen

3.3.1 Constitutional positions and current policy context

Up until the most recent past higher education policy in *Hessen* was greatly influenced by **financial restrictions** of the state budget, which the universities had to cope with in ever changing forms. In the end they determined the scope of autonomous action that was left to the universities with respect to fund allocation.

The *Land* implemented special financial programmes in order to reduce the immense reinvestment requirements. At the same time the funds for research and teaching continually got less over the years. At the University of Marburg for example this amount went down by nearly 30 % between 1995 until 1998. Within the same period cuts in the staff budget reduced the number of positions. Against this background and under the conditions of cameralist budgeting, long-term and target-orientated financial planning was only possible on a limited scale.

This was the starting point for **structural changes**. It was agreed to introduce lump sum budgets from 1996 on within the framework of cameralist budgeting at two universities and three *Fachhochschulen* on a trial basis. As a result, the appropriation of income and expenditure authorisations was largely removed and the participating institutions were given more scope of action for autonomous decisions.

After the end of the pilot project, the "**New Public Management System for Universities**" was taken as a basis for further planning in the higher education sector. The basis of a comprehensive reform concept was established and integrated in the reform of the entire public administration.

As a logical consequence, the universities in *Hessen* were then selected to be pilot users of the new administration principles with which the following management targets are linked:

- Strengthening the parliamentary budgetary law,
- Improving the political steering capabilities,
- Standardisation and modernisation of data processing,
- Building up the university administration's internal controlling capacity,
- and as a budgetary policy objective
 - short-term: consolidation of the budget,
 - medium-term: lasting financial policy.

Since the Hessian Higher Education Act of 1998 and the amendments made in 1999 and 2000, this financial reform and the structure of development planning has been established as part of the new steering system. The amendment of the Higher Education Act on 31 July 2000 created the legal basis for the new responsibility of the universities in the finance sector and describes the future process of higher education development planning with the different areas of responsibility by the state and the universities.

3.3.2 Description of policy instruments

The new management system

The output-orientated management intended by the legislator is directed at the performance of higher education institutions, above all in the core tasks of research and teaching. At the same time the management of funds has largely shifted from the state to the universities, and hence their financial autonomy has been strengthened.

Important reform elements in the transfer of the cameralist budget to an output-orientated budgetary system are the introduction of **cost accounting**, supplemented by an **internal and external reporting system with controlling**.

The higher education institutions develop their objectives within the framework of the government's decisions of general principle. With different centres of gravity the universities as well as the Ministry for Science and Art are responsible for structuring higher education development. In order to realise development planning targets, the ministry concludes **target agreements** with the universities which determine the development of the respective university for several years, but in which the development of a university's profile should also be expressed. In case of conflict (if the universities and the

ministry cannot come to an agreement) the ministry may influence the structural planning through target objectives.

The new Higher Education Act does not only create new principles for the relationship between the state and higher education institutions, it also provides the latter with more **efficient organisational and decision-making structures**. The dean's office (dean, vice-dean, study dean) has a similar position in the department as the executive board has for the university, including the responsibility of fund allocation within the framework of the structural plan. For the internal implementation of structural planning the university executive board also concludes target agreements with the departments. The executive board and the departments also have to agree on the content and time scale of the report on the achievements gained as well as on the procedures regarding quality assurance.

Principles for assessing the higher education budget

In the state budget 2003 the new principles for the allocation of higher education funds are to be applied for the first time in a **budget formula**. Accompanying the preparation of the budget, a higher education pact was signed on 21 January 2002 between the parliament and the higher education institutions which should provide a reliable basis for the development of budget funds. Thus, in 2001 the allocation of funds for the higher education institutions was established until 2005. In principle it was agreed to pay wage increases up until then, though with deductions of 0.5% in the years 2002 and 2003 as well as 0.3% in the years 2004 and 2005. For non-personnel and investment expenses 15 million DM are provided additionally every year.

Since there will probably be upward and downward **deviations** among the universities when the performance-orientated fund appropriation is introduced, it has been agreed that deviations from the budget of the year 2002 can only have an annual negative effect of up to 1% loss during a transitional five-year period. Conversely, this means, that universities entitled to a higher appropriation have to be content with lower instalments.

Elements of the budget

At the start of the new budgeting system there will only be **one total budget for all higher education institutions**, out of which universities, art academies and *Fachhochschulen* will be financed with different weightings but according to the same parameters. The framework concept on the new university management system in *Hessen* is based on the idea of a comprehensive key figure system. Only clear output-orientated parameters are taken into account.

The performance-orientated overall budget of each university will receive appropriations from the following elements: **basic budget, performance budget, innovation budget**. In addition there are appropriations outside the formula for special cases.

The **basic budget** is to guarantee the financing of basic functions in research, teaching and promotion of junior academics. This accounts for 80% of a higher education institution's total budget. In order to calculate this, a single performance parameter and the standard cost value, differentiated according to subject groups, are decisive:

- The basis for the higher education institution's output is the number of students within the standard period of study according to subject groups as fixed by the target agreements.
- To compensate for the relevant costs, a price is fixed for each student trained in the respective subject cluster. The Ministry of Science and Art has established a standard cost value for study places in "an analytical way".

In the **performance budget** 15% of a higher education institution's budget is allocated for special achievements in teaching and research. Results of particular quality are additionally financed by the performance budget in order to provide an incentive. Thus, competition between the higher education institutions for proportions of the budget should also be stimulated. The following parameters are decisive for the performance budget:

- Level of third-party funds acquired,
- Acquisition of Graduate Colleges, Research Groups and Collaborative Research Centres of the *Deutsche Forschungsgemeinschaft*,
- Number of doctorates and habilitations (with specific weightings in favour of doctorates and habilitations of women in natural and engineering sciences),
- Appointment of women to professorships,
- Number of foreign students with non-German education within the standard period of study,
- Number of graduates (with special emphasis on female graduates),
- Number of graduates within the standard period of study plus two semesters.

The **innovation budget** contains the financing of important projects in research and teaching (development of new research foci, development of new courses of study and study elements, transfer of knowledge and technology). It is allocated according to projects and after external assessment. The intention behind this is that evaluated future plans are supported. These funds should be awarded to the universities additionally and not be gained from restructuring the university budget.

Additional cost-effective tasks ("special cases") which are not adequately compensated for within the formula based criteria (e.g. preparatory courses, university museums, pilot agricultural goods, organisational expenses for university clinics) should not, in the long-term, contain more than 5% of the total budget.

3.4 Niedersachsen

3.4.1 Current policy context

Niedersachsen was the first *Land* that adopted the **lump sum budget** for higher education institutions. In 1995 a pilot project was carried out for ten years wherein three universities were involved: the Technical University of Clausthal, the *Fachhochschule* of Osnabrück and the University of Oldenburg. The following features were constitutive for the basic framework of the pilot project:

The universities and the Fachhochschulen in general are managed as **state companies** (*Landesbetriebe*). This enabled the introduction of business accounting and accounting standards. As state companies, the higher education institutions remain part of the governmental administration in an altered shape. They continue to be subject to the legal and, above all, to the state supervision of the *Land*.

- The higher education institutions establish **budget plans** which are subdivided into a result and a financial plan. These have to be brought into line with the budget legislation once it has passed.
- The monetary execution of the budget plan is effected by the *Land* in four stages of appropriations which follow the cameralist pattern of the state budget:
 - for the current operation of the higher education institutions,
 - for building maintenance,
 - for investments,
 - for other purposes, that is special tasks and measures.
- The binding nature of the staffing scheme was done away with – the proof of need and the staffing scheme are only an explanation of the business plan. This regulation enables the higher education institutions to move from staff administration to **staff management**. It is now possible to create new positions or to cut positions as well as to change pay scale groupings without the involvement of the parliament.

- The possibility of **transferring funds to the next fiscal year** as well as **building up reserves** over a period of five years was introduced, but the money has to be kept on an interest free state account. The year-end financial statement is examined by two accountants centrally and is approved by the Ministry of Science in agreement with the Ministry of Finance.
- As a countermove the universities agreed to build up a **cost and activity accounting**. By combining business accounting with cost and activity accounting a controlling system was set up which should lead to a business way of dealing with the public funds available as well as, generally, a more economic conduct by the universities. The finance and personnel management is supported by SAP/R 3.

The lump sum budget was extended to all universities and Fachhochschulen from 2001 on under the conditions described.

3.4.2 Description of policy instruments

Monetary aspects

The present fund allocation from the *Land* to the universities results from an extrapolation of university budgets that have grown historically. The older universities get more and the younger ones get less. At the same time one has to realise the highly **heterogeneous higher education sector** in *Niedersachsen*, with very small universities on the one hand and large ones on the other hand. For the annual budget 2004, the *Land* intends to allocate 10% of the total budget on the basis of a formula by applying the parameters research, teaching, internationalisation and the principle of equal opportunities for women.

A new development has been initiated as a result of the legislative process for the Higher Education Act of *Niedersachsen* which became effective in June 2002. The future financing of universities and Fachhochschulen is based on **target agreements** about development and performance objectives in context with governmental financing for several years. The following criteria are decisive for it:

- The number of study places and the introduction or cancellation of study courses,
- The reduction of periods of study and the number of drop outs,
- The promotion of junior academics,
- Quality assurance of teaching and research,

- The predefinition of research foci,
- Progress in internationalisation and
- Progress made in providing equal opportunities for women.

Non-monetary aspects

On the basis of an agreement between the *Land* and the higher education institutions, the **Central Evaluation and Accreditation Agency (ZEvA)** is carrying out evaluation of teaching subject per subject every few years in a procedure settled on by the Rectors' Conference of *Niedersachsen*. The assessment concerns the organisation and the content of courses and includes the opinion of students.

For research evaluation the **Scientific Commission Niedersachsen** was set up. It evaluates research and carries out assessments as far down as individual professorships. The assessment of research performance complies with a scale of "internationally noticeable", "regionally noticeable" or "not noticeable". The results are given to those concerned and to the university management and are published anonymously. The experts for both procedures are not from *Niedersachsen*. The results of the completed state-wide evaluations show the proficiency of the individual universities.

Further developments

Higher education institutions have to develop **product cost accounting**. This process was adopted in the year 2001 and the development of a reference model for cost and activity accounting was started. The cost units should represent research and development, external services, study and teaching as well as continuing education. Key figures should be developed from this for these areas, which should then provide the basis for the budgeting.

Niedersachsen has transformed five higher education institutions into **endowments**. These are the universities of Göttingen, Hildesheim and Lüneburg, the Veterinary University Hannover and the *Fachhochschule* Osnabrück. The former state institutions are devolved in endowments and thus become legally independent organisations. Instead of being governed by decrees and orders of the *Land*, they are solely ruled by target agreements. Moreover, they can build up reserves, e.g. for financing additional study courses or research activities. With the transfer into an endowment, universities and *Fachhochschulen* become the owner of the land and buildings they make use of as well as employer of their staff. Nonetheless, the state responsibility for financing higher education persists.

For the winter semester 2003/2004, part of the teacher training courses are transferred to the bachelor-master-structure. This is an important step on the way to a European space for Higher Education in terms of the Bologna Declaration.

3.5 Nordrhein–Westfalen

3.5.1 Current policy context

The deregulation process in *Nordrhein–Westfalen* aims at giving higher education institutions more responsibility by means of **efficient management structures** which should enable them to fulfil their duties more effectively. This greater autonomy is linked to the demand for more quality assurance and new controlling systems.

Higher education budgets are further evolved in the direction of **lump sum budgets**. This is related to a greater autonomy of decision and more responsibility for the financial resources allocated by the *Land*. Indeed, **responsibility for buildings and real estate** was not assigned to the institutions but to a state company.

The Higher Education Act of *Nordrhein–Westfalen* of 14 March 2000 has given greater autonomy to the higher education institutions as regards their **internal organisation** (e.g. set up, change or closing of departments) and their **statutes** (e.g. examination and study regulations). It also introduces participatory management tools, particularly target agreements between the ministry and higher education institutions.

A series of **decision-making rights** were shifted from the academic senate to the rectorate with the new Higher Education Act. The rectorate is obliged to get in touch with the senate prior to the decision on the higher education development plan, before concluding target agreements and before determining the principles of the allocation of budget funds. At departmental level essential management duties are focused on the dean. The higher education institutions can also decide to have a self-governing body, the dean's office, instead of being managed by one person.

In contrast to a number of other *Länder*, higher education legislation in *Nordrhein–Westfalen* does not provide for a higher education board, which has its own decision-making powers. The **board of trustees** just has an advisory and supporting function for the university management.

For the introduction of Bachelor and Master degree courses the **accreditation of study programmes** is stipulated in a binding way. This is a precondition for the approval of study programmes by the ministry. Because of the increasing importance of accreditation, the higher education institutions of *Nordrhein-Westfalen* and *Rheinland-Pfalz* set up the Agency for Quality Assessment by accrediting study programmes on 25 January 2002, whose main task is to assess the quality of study programmes and to accredit them.

3.5.2 Description of policy instruments

The year 1999 marks a decisive point in *Nordrhein-Westfalens* higher education planning. Against the background of the tense budget situation, the government concluded the so-called **Quality Pact** with the higher education institutions.²¹ They were guaranteed planning security for the next five years and the exemption of all budget restrictions. Instead, a total of 2 000 positions in academic and academic-related fields were to be cut over the next ten years. 1 626 positions thereof already had remarks that they should be discontinued in future as a result of earlier concentration measures. The characteristic of the quality pact of *Nordrhein-Westfalen* is that funds with the monetary equivalent of up to 1 000 positions flow into an **innovation fund** to support innovative focal points of the universities in research and teaching, in particular in connection with negotiations on appointments.

Over and above that the universities were asked to submit a **report on structural development** to an independent **council of experts**. On this basis the council of experts made recommendations on higher education development in February 2001. The extension of the *Fachhochschulen* and the guarantee of the location of all higher education institutions were guidelines set by the ministry. The work of the council of experts represents a state-wide evaluation with the classical elements "**internal evaluation**" (university reports on structural development) and "**external evaluation**" (inspection by the council of experts and final report) whose results are implemented within the follow-up of the evaluation process. Meanwhile, the quality pact of 1999 has turned out to be a protective mechanism for the higher education institutions in the face of future budgetary restrictions – even if only for a few years.

²¹ http://www.rpl.de/Wissenschaft/HS_Finanzierung/hochschulfinanz.pdf

The financing of higher education institutions in *Nordrhein-Westfalen* can be classified in four categories:

- Basic subsidies out of the state budget,
- Additional grants through supplementary state funds,
- Third-party funds (public as well as private third parties) and
- Income from management and commercial activities (above all from university hospitals).

Basic subsidies are the main element of funding for the higher education institutions. They are integrated in the budget established by the government together with the draft of the budgetary law and adopted by the parliament. The funds estimated in the budget are allocated among the higher education institutions partly as a result of **budget negotiations** and partly through **parameter-based procedures**. The estimation of funds is carried out in a cameralist way.

The introduction of financial autonomy for higher education institutions in *Nordrhein-Westfalen* came with the budget of the year 1996. In its current form it is based on four pillars:

- Own income to remain within the institutions (e.g. through letting something),
- Almost comprehensive mutual coverage of the expenses,
- Flexibility of the staff budget,
- Building up reserves through self-managed funds of up to 2% of the annual budget volume.

The principles of financial autonomy are integrated in the budget as so-called budgetary notes and are adopted by the parliament through the budgetary law. For the budget year 2006 the introduction of a **lump sum budget** for all higher education institutions is planned. This is first of all to be tested at two universities and at two *Fachhochschulen* in the year 2003.

Since 1994 the funds for teaching and research have been allocated in accordance with **performance parameters**. The current model is based on the five parameters

- Number of graduates,
- Acquired research funds (third-party funds),
- Number of doctorates,
- Number of students (in the first four subject-related semesters) and
- Positions for academic staff.

The model provides different weighting coefficients for the individual parameters for the different subject groups as well as for both types of higher education institutions, universities and *Fachhochschulen*. Furthermore, since 1999 the model has included a component, which takes into account the progress made in providing equal opportunities for women.

The new higher education legislation provided the higher education institutions with the necessary instruments for self-governance. The **target agreements** already mentioned form part of these instruments, as does the introduction of **financial controlling** in connection with **business accounting** and a **reporting system, evaluation procedures**, the higher education development plan as well as the development plans of the departments. The legislation links the traditional monitoring instruments with the new ones in a way that they are enabling the ministry to do without exerting direct influence, if the universities on their part agree to the new types of institutional management.

The **higher education development plan** is established as a central guidance and planning instrument by the rectorate and takes the departments' development plans as a binding framework for action into consideration. It contains statements about the range of study courses offered, the focal points for research and the internal organisation. The ministry is also able to stipulate targets for the development of the higher education institutions which have to be observed when drawing up the development plans. This should encourage the higher education institutions to act in a professional and systematical way.

3.6 Rheinland-Pfalz

3.6.1 Current policy context

Over the last few years, *Rheinland-Pfalz* has taken leave of centralised governmental management and is pursuing global management, particularly through the budget and budgetary legislation. The aim of the Minister for Education and Science is to achieve a far-reaching **decentralisation of decisions, responsibility and budgets** and hence a strengthening of the autonomy of higher education institutions.

The fundamental element for managing the higher education institutions in *Rheinland-Pfalz* is the budget law with which the dual budgets (budgets for two years) were adopted each time over the past years. The higher education budgets contain comprehensive flexibility measures so that in fact one can speak of a lump sum budget. In particular the budgets include extensive mutual coverage of budget items, and the ability to transfer funds within the next fiscal year is largely ensured. Through these budgetary legal regulations the creation of financial reserves is possible.

A further essential point is the fact that nearly all income which universities gain remain in their budgets. In addition, interests on private people's third-party funds can be yielded, universities can raise the number of positions when implementing the budget, and they can make independent decisions on promotions up to a certain level.

After the budget regulations in *Rheinland-Pfalz*, cost and activity accounting as an internal management instrument is to be introduced in suitable areas. Higher education institutions in *Rheinland-Pfalz* have taken this up and defined the framework for this in agreement with the ministry. All institutions are striving for the introduction of cost and activity accounting on this basis.

3.6.2 Description of policy instruments

In *Rheinland-Pfalz* three **models for fund allocation, manpower allocation and space management** were developed as policy instruments²². All three parameter based models that will be presented below have comparable intentions. They should provide higher education institutions with

- A greater level of planning security,
- A fairer distribution of funds and positions,
- Greater comparability through the increased transparency of resource allocation,
- A possibility to remunerate individual performance and results, and hence to promote developing a profile,
- Monetary and non-monetary incentives for special aspects, e.g. the promotion of women in science.

Basis of the calculations are the average values of each of the last three years. At present, 80% of a university's resources are determined by the existing distribution models already. With the introduction of space management this proportion will increase. Of course the *Land* as well as the individual university has to deal with **financial management outside of formula-based** models. Innovative developments, the promotion of new research focal points or the establishment of new courses of study can, as a rule, not be portrayed suitably with model parameters. For these reasons there are possibilities for research promotion which require a competitively organised application procedure at both the *Land* level and at university level.

²² http://www.mwwfk.rpl.de/Wissenschaft/HS_Finanzierung/hochschulfinanz.pdf

3.6.2.1 The fund allocation model

According to the fund allocation model, the funds of the *Land* are distributed among the higher education institutions (universities and universities of applied sciences). Since 1994 this model has represented a **calculation system for the allocation of funds for research and teaching**. In the year 2001 the amount allocated among the universities was around 72.1 million DM. This amount is split up into the four areas of basic resources (20% of the allocated amount), additional teaching resources (45%), additional research resources (30 %) and additional resources for junior academics (5%) on the basis of the recommendations made by the Science Council.

Pillars of the fund allocation model for teaching and research in Rheinland-Pfalz

Basic resources (20%)	
(1)	Number of professors
(2)	Half the number of academic staff
Additional teaching resources (45%)	
	Half each
(1)	Students within standard period of study
(2)	Number of graduates
Additional research resources (30%)	
	University's proportion of income from third-party funds
Additional equipment for junior academics (5%)	
(1)	Number of doctorates (weighted singly)
(2)	Number of habilitations (weighted 10-fold)

Subject and university-specific weighting factors were included for the professors and staff as well as for student numbers.

3.6.2.2 The manpower allocation model

Starting from the fund allocation model in *Rheinland-Pfalz*, a manpower allocation model was developed which allocates the staff among the higher education institutions. The concept needs constant further development from all those concerned – the higher education institutions and the Ministry.

The current manpower allocation model designates a five-tier calculation procedure:

- Determining of the staff supply at the higher education institutions of the *Land* (amount to be distributed),
- Determining the basic requirements (in terms of numbers) for academic staff,
- Determining the need for additional academic staff,
- Balancing of accounts of the supply level and
- Determining the need for non-academic staff.

Turning this concept into action is leading to a **redistribution of positions and staff appropriations**. In order to keep the consequences bearable for the higher education institutions, only 20 % of the computed result is implemented annually. Non-allocated computed residual amounts from both personnel groups go into the innovation fund of the *Land*.

3.6.2.3 Space management

Since the space management system is still being finalised as a model, at this point only tendencies will be mentioned. The concept is based on the consideration that the complete costs of the utilisation of premises are adopted in the **users' budget** and have to be borne by the user. The user can autonomously determine the extent of the space utilisation (quantitatively and qualitatively) within the fixed framework. In space management the following separation of tasks between the participating *Land*, higher education institution and department is striven for:

- The ministry allocates a budget to the universities from the funds for building investment and maintenance according to their space requirements. The budget is assessed according to subject-specific and trans-institutional standard criteria.
- The allocated budget is split up among the individual departments according to adapted criteria by the university management.
- The departments can make autonomous decisions about the use of their budgets. The available funds can also be used for other types of expenditure.
- The departments have to pay rent for the areas used. Different rental fees depending on usability and equipment are assigned to the areas used.
- The higher education institutions are, first of all, given the economic ownership of their property. They deal with owner duties like for example letting, building ownership, building maintenance and investment planning. In higher education property management the technical and business know-how in property is brought together.

Investment financing is made by a trans-institutional facility, the "Financing of Higher Education Construction". The depreciations that are possible onto properties in business accounting are paid to these and are then distributed to the universities again by way of investment subsidies.

4 Analysis of securing financial viability and evaluation of effectiveness of policy instruments

In Germany, almost all higher education institutions are public corporations that form a part of the *Länder* administration, and their **budget funds are almost entirely provided from public sources**. Higher education institutions do not face the risk of insolvency. As their possibilities to engage in commercial activities are limited, the compliance with financial regulations at state level, mainly the budget law and rules, have been adequate instruments to ensure financial monitoring for a long time.

According to the traditional way of state governance, within the relevant Ministry of Science and Education, the higher education supervisory authority examines whether actions taken are appropriate and economically efficient and whether targets are being fulfilled. Economic efficiency and misuse of funds is also monitored by the **court of auditors** of the relevant *Land*.

Admittedly, instruments for financial monitoring and control in the higher education sector which basically apply to the conditions at the outset and not to the results were increasingly considered to be insufficient – especially at a time when student numbers are rising with no accompanying increase in funding and when the question of **efficiency** in higher education is coming into sharp focus.

The potential of the higher education institutions to fulfil their tasks more effectively was improved by way of increasing financial and organisational competences. Indeed, none of the *Länder* does without governmental supervision of higher education institutions. Combined with new models of financing, new models of monitoring and assuring financial reliability are put into practice. In this context, increasingly **instruments of business administration** are introduced.

All *Länder* allocate funds to higher education institutions to a greater or lesser extent by applying quantitative parameters. There is a noticeable tendency in all *Länder* to move from a detailed financial steering to lump sum budgets with **formula based financing** in order to realise efficiency gains.

In addition, the *Länder* governments are enlarging the financial scope of action of the higher education institutions by giving them the right to retain money gained on behalf of the public funding (e.g. effective use of assets like letting facilities, commercialisation

of patents, fundraising activities etc.). This only accounts for a small part of the total income yet. Until now, this **extra money** serves the respective institution to concentrate on special issues in connection with developing a profile. If these activities are being extended and the higher education institutions become more and more financially dependent on this income, one has surely to consider introducing some additional accountability mechanisms.

To safeguard financial reliability, in some *Länder*, **higher education pacts (frame-contracts)** have been concluded between the *Land* as the responsible body for higher education and the higher education institutions. The contracts stipulate the allocation of the negotiated budget sum for the validity period (usually five or ten years) and fix budget pledges during this period – although the public budget might be shrinking in general. The aim is to give the institutions the required planning security for several years. As a countermove, budget cuts to a greater or lesser extent have to be agreed on a long-term basis. Although the contracts effect savings or at least a shifting in the higher education budgets and they demand concessions (e.g. staff reductions), this provides long-term **planning security**. Thus, the financial viability of the higher education institutions is safeguarded additionally. Higher education pacts exist in *Baden-Württemberg, Niedersachsen, Hessen, Nordrhein-Westfalen* as well as in the city states *Berlin, Bremen* and *Hamburg*. They have proved to be a reasonable instrument to guarantee planning security for several years.

Contracts or pacts at *Länder* level are often supplemented by **target agreements** with the individual institutions which fix the basic conditions for the further development of the institutions associated with the essential resources. Target agreements have been introduced in *Baden-Württemberg, Niedersachsen, Hessen, Nordrhein-Westfalen, Saarland, Schleswig-Holstein, Hamburg* and *Bremen*. Indeed, this instrument developed in business administration has not yet been transformed appropriately into the higher education system, as it is not always obvious which targets and results form part of the agreements and in what detail they should be concluded. Hence, they can be accompanied by long negotiations between higher education institutions and the state. Sometimes, performance figures are agreed upon in the target negotiations, if the university's funding is widely dependent on fulfilling these objectives.

While taking some steps to formula based funding, lump sum budgets, and perennial target agreements, the **accounting systems** have to be enlarged. There is a great emphasis in the German *Länder* to implement a cost and activity accounting system, often supported by

the SAP R/3 software, which is adapted to the purposes and particularities in higher education.²³ Its introduction in all higher education institutions is compulsory in *Hessen*, in other *Länder* it is implemented successively to strengthen the cost awareness. The overall purpose is to render account showing the appropriate utilisation of public funds.

The last module in the context of financing models for higher education is a **financial reporting system** which proves to be suitable for higher education institutions to demonstrate their results. External reporting systems do not exist on a satisfactory level. In future it will be necessary to develop reporting systems that are adjusted to the specific situation of higher education institutions, given that the state by and by withdraws from detailed governance and leaves more decisions to the higher education institutions themselves.

To facilitate the planning process as well as ex post supervision, a **data-warehouse system** (CEUS^{HB}) is introduced within all universities in Bavaria. Thus all persons responsible for the management of the higher education institutions are able to get the required up-to-date information in a simple and flexible way.

Moreover, instruments for **quality assurance** are widely used by the *Länder*, e.g. evaluations organised by evaluation agencies at *Länder* level as well as assessments by expert committees. However, in general a direct tie between evaluation procedures and the allocation of funds does not exist.

The evaluation of effectiveness of policy instruments is ensured through a diverse network of policy advisory bodies both at *Länder* level as well as at national level. Some *Länder* have introduced higher education boards with advisory and partly decision-making functions (cp.1.4). The appointment of committees of experts which give recommendations for the further development of the higher education sector is another instrument of policy advice widely used in the *Länder* (cp. 3). As regards higher education reform, the experts usually have the confidence of both the ministry and the institutions. This serves to bring together a wide field of interests. Their tasks are usually assigned to by the ministry responsible for higher education of the respective *Land*. For research and technology policy, specific advisory bodies at *Länder* level often exist. The main policy advisor at national level is the Science Council which is working on behalf of the Bund and the *Länder* (cp.2).

²³ Küpper, H.-U.: Rechnungslegung von Hochschulen. In: Betriebswirtschaftliche Forschung und Praxis, Heft 6, 2001, p. 578–592.

5 Strengths, weaknesses, opportunities, risks of the current approach

As long as higher education institutions were sufficiently financed by the state, the question of a basic change of the higher education system in the sense of a paradigm shift to a global allocation of funds solely based on output-factors and performance indicators was not raised. This applies also to the change of the legal status of the institutions into self-governance corporate bodies with full responsibility of budgets and staff.

In Germany, the state does not retreat from the strategic overall responsibility for higher education institutions. Since the latter are exclusively financed by state funds, governments also have the task of developing the strategic objectives of a modern higher education policy.

Strengths:

- Typical for the current German approach is an enhancement and further development of the growing higher education system – a radical reform is not enforced. This implies that the system keeps its balance and erroneous trends are prevented.
- The institutional diversity of the higher education sector is a characteristic feature. Against this background, increasing parts of the budgets are allocated according to task and performance based parameters with emphasis on output-factors.
- The planning security higher education institutions acquire through frame-contracts or pacts has to be rated highly in a time of declining public finances.
- The fact that in Germany higher education institutions belong to the area of responsibility of the *Länder* has led to a competitive federalism. The multitude of financial management models at *Länder* level enables the development of suitable instruments for each higher education system. The *Länder* are competing for the best solutions and procedures to shape the new instruments. This brings about the development of different practices, good solutions become apparent.

Weaknesses:

- A weakness of the different *Länder* approaches is the existence of various management tools which are being developed side by side. This might hamper learning effects. As regards formula based funding, there is an agreement on the relevant indicators. Concerning the development of target agreements, it is not always clear which results should be part of the agreements and in what detail they should be concluded.

- In most of the *Länder*, the ministries reserve considerable rights to decide on administrative matters. This involves the risk that centralised governmental management will continue to be practiced with the new management instruments.
- The reporting instruments are still underdeveloped: With regard to formula financing and lump sum budgets, extensive experiences have been made. Considerations on the reform of the reporting systems are, however, still at the beginning of the development.
- Finally, it should be mentioned that the impetus for the current reforms comes from the higher education management and the academic administration. A broad anchoring within the higher education institutions, which, up to now, were given comprehensive rights to involve the professors, academic staff and students, is a long-lasting task.

Opportunities:

- Higher education institutions move away from centralised planning in the direction of more competitive, decentral systems. They develop profiles in competition with other higher education institutions with similar subject groups. This process requires more self-guidance from the institutions.
- The pressure for change, initiated by the new relationship between the state and higher education institutions and the poor situation of the *Länder* budgets, forces the higher education institutions to implement new internal management instruments and structures.
- Higher education management is not merely a financial issue. Up to the recent past, the state has always more or less been involved in admission decisions. Currently, there are efforts to give the students and their demands a greater steering function. Conditions of admission are considerably changing at present. By and by, the individual higher education institutions are granted the right to select their students.

Risks:

- Formula based funding is related to the aim to replace negotiations between higher education institutions and the state by automated allocation procedures. In this connection the risk occurs that formula based funding models are only used to modify a political pre-set budget, and that the appropriateness of funding requirements in general is not any more a matter of political discussion. The more standardised the allocation rates are, the less the appropriateness of fund allocations on the whole can be discussed between the higher education institutions and the state.

- All formula based models effect a considerable shifting within the higher education budgets. If the starting position for calculating the formula is disadvantageous, the risk of a downward spiral occurs. As the *Länder* are aware of this problem, usually only a limited proportion of the calculated result is implemented.
- Other involuntary effects of allocation models have to be prevented: Small subjects like cultural studies with little chances to acquire a considerable amount of students and additional funds should not be given up. On the other side, the capacities of subjects like engineering and natural sciences with lower rates of enrolments at times due to economic factors have to be maintained.

Outlook on future trends in the higher education system:

- Higher education institutions are implementing reform projects with the aim of optimising costs and results and raise cost-awareness at all levels. But optimising resources often seems to reach its limits. In view of the rising costs for universities, their financial basis needs to be improved. Therefore the introduction of a system of socially just and reasonable tuition fees as an additional financial source will remain a point of discussion in Germany.
- It has to be realised that the worsening under-funding of higher education institutions jeopardises their capacity to keep and attract the best talent, and to strengthen the excellence of their research and teaching activities. Given that it is highly unlikely that additional public funding can alone make up the growing shortfall, other ways have to be found to increase and diversify the institutions' income.
- To open up additional sources of income, also more market-orientation is required. The question to what extent this should be put in practice is another point for the further discussion in Germany.

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