More Competition in German Higher Education: Expectations, Developments, Outcomes

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1. Introduction

In June 2000 the German Monopolies Commission published a report which argued that competition should become the leading principle for higher education policy. The report argues that a functioning market facilitates effective communication between buyers and sellers and therefore provides an information base superior to any amount of state planning. Through orientation on market demand universities will provide the right thing for the market (i.e., become more effective), at the right time and at the right price (i.e., become more efficient) (Monopolkommission 2000, passim). This claim is a critique of the effects of ineffective state efforts to initiate higher education reforms in Germany, particularly since the expansion of the system in the 1970s, and as an argument for a replacement of such top-down reforms with the dynamic instrument of the market. In the conclusion to his book on the study-structure reforms in Germany between 1975 and 1986, Schreiterer judges the planned, rational steering approach of these reforms to have been a complete failure (1989, p. 322) and the possibility of the state to steer higher education in such a way as over-estimated (1989, p. 310). Along with many other policy analysts and political advisors, including the German Science Council (WR 1994, 2000), Schreiterer sees a need to change the approach to policy coordination away from state dirigisme towards a coordination framework based on decentralised responsibility

at the institutional level and incentive-driven state initiatives, although he doubts whether state planning can be completely replaced – it just has to get smarter (1989, pp. 322-326). A book which has remained a manifesto for reform in German higher education since its publication in 2000 speaks of the aim to "unleash" the university from the bonds of state legislations and regulations; HEIs[1] would thereby become "learning organizations" in a system which could "breathe" (Müller-Böling 2000, p. 30). Although the term *Wettbewerb* (competition) has become a key element of higher education reform discourse in Germany,[2] even in 2005 universities still could not be characterised as "unleashed". During the past few years, facilitating competition has been only one of at least three competing policy objectives for higher education, the other two being budget restraint and system restructuring. The question is whether all three objectives can be achieved simultaneously. Is talk of competition as the solution to Germany's higher education problems too simple?

In an interim conclusion on reform in German higher education from 2001, Kehm and Pasternack argued that talk of competition and institutional autonomy has more to do with the reduction of complexity in political discourses than with the ultimate purpose of state reform initiatives being enacted (2001, p. 226). The authors argue that the German state strives to maintain its influence on higher education and tends to be more reactionary in this respect than its neighbours (2001, p. 214). In 2004 and 2005 Germany saw efforts to introduce a national competition between German HEIs for special funding as "elite universities" and general agreement on the need to introduce tuition fees into the system. Both initiatives would introduce significant new aspects of competition into German higher education; however, the implementation of both initiatives is being hindered by the claims of the *Länder* for sovereignty over "their" higher education systems. Since the place, which these initiatives will ultimately hold in German higher education, cannot yet be fully foreseen, they will not be discussed in detail below.

This paper argues that the main instrument for implementing competition in German higher education is currently the method of allocating the state subsidy, since it is the most significant component of institu-

1 The term higher education institution (HEI) will be used in this article as a generic term. In the German system, the most predominant institutions of higher education with a vocational orientation and an emphasis on teaching over research are called *Fachhochschulen*. These institutions usually use the term "University of Applied Science" in English language prospecti, but to avoid confusion the original German term will be used when referring to these institutions throughout this paper.

2 A recent strategy document from the Science Minister in Baden-Württemberg used the term 39 times in 90 pages (Frankenberg 2004).

tions' incomes. This point becomes clear when data is viewed in a comparative context (section 2). The paper investigates the current restrictions to the development of competition using international comparison (section 3) and a closer look at elements of the German system (section 4). The main agents of coordination in Germany are the *Länder*; it is necessary to analyse the implementation and debates regarding competition at this level to understand the context fully. The higher education system in Berlin has been chosen for this analysis because it very clearly highlights some of the major points common to the other higher education systems in Germany.[3]

2. General comparison of higher education funding in Germany, UK, and USA

Different sources of funding give rise to competition by rewarding successful institutions with financial resources. It is therefore interesting to compare the various sources and consider the potential effect of each on competition between institutions of higher education.

Incomes are made up of state subsidies, third party funds for teaching (i.e., tuition fees) and research, operating income, and in some cases, donations and interest from endowment funds. According to dependency theory, the effect funding measures have on an institution is largely dependent on the relative magnitude and criticality of a given source of funding (Slaughter and Leslie 1999, p. 68). Furthermore, each of these funding streams involves different sources of funding (public vs. private) and tends to be allocated to different levels in the HEI (see table 1).

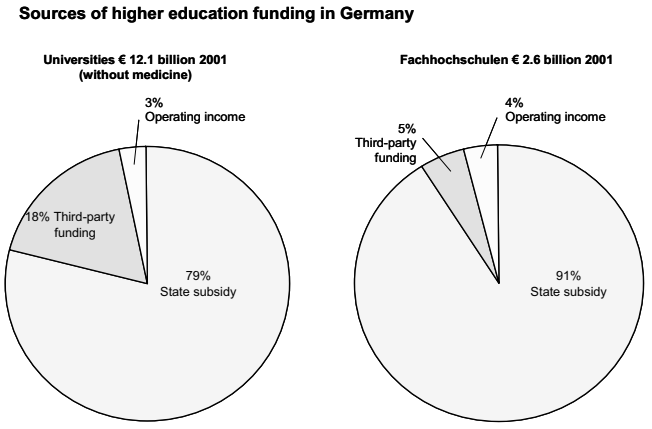
3 This contribution was written in 2005. Although the general character of the German higher education system has not changed since then and, therefore, the following analysis holds, some modifications have occurred. These concern an overall slight increase in the share of institutional grants determined by indicators, the implementation of supplementary research funding for "elite universities" and the introduction of moderate tuition fees. For an update see Orr et al. (2007) and Orr and Schwarzenberger (2007).

Table 1: Income streams and income receiver

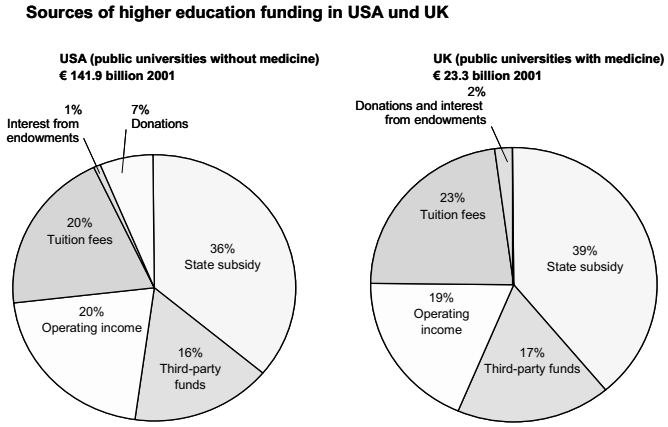
Funding stream	Private	Public	"Performer"/Receiver
State grant		X	Central administration
Donations	X		
Investment and Interest/ General operating income	X		
Contract funding and subsidies for research (public)		X	Professor/Workgroup
Contract funding research (private)	X		
Tuition fees	X	(X)	

For illustrative purposes, figure 1 compares the income streams of universities and *Fachhochschulen* in Germany with those in the United Kingdom and the United States. In particular, the charts emphasise the high dependency of German institutions on state subsidies, which account on average for between 79% and 91% of institutional incomes.

Figure 1: Sources of higher education funding in Germany, UK, and USA



Data source: Germany – Statistisches Bundesamt (2003)



Data sources: USA – The Chronicle of Higher Education (2004); UK – Higher Education Statistics Agency (2004)

Interestingly, the proportion of budgets funded by third parties at 16-18% is very similar in three of the systems. The high level of dependency on the state subsidy shown by the *Fachhochschulen* is directly related to their lower levels of third-party funding. Such funding is highly competitive since all HEIs compete against each other for the monies. In contrast to state subsidies, however, the proportion of income funded via this source varies greatly between institutions and institution types. Just 34 of a total of 250 American research universities and four of a total of 174 HEIs in the UK receive the lion's share of research funding (UK: 25% or €1.5 bill. 2002-03); in Germany the top twenty universities account for 56% of third-party research funding. A further difference – highlighted in table 1 – is the source of these funds. Whilst funding from the German Research Council (DFG) accounts for over a third of all third-party funding in the German university sector and commercial contracts make up about a fifth, the *Fachhochschulen* receive over a third of their third-party funding from industry and a negligible amount from the DFG (Waugaman et al. 2004, p. 25). Universities therefore receive this funding stream from a largely public funding sources and *Fachhochschulen* acquire it on the private market.

A remarkable difference between Germany and the other two countries can be seen in respect of the income drawn from other operations (e.g., cafes, accommodation, conferences, shops, etc.) and tuition fees. Currently, many operations outside the core tasks generate no supplementary income for HEIs in Germany. On the one hand, this is because the *Studentenwerke* run auxiliary facilities which would otherwise generate such income such as restaurants, cafes, and halls of residence. On

the other hand, courses in Germany remain virtually free of charge to the student at the moment, but tuition fees are expected within the next few years. Leszczensky has estimated that these could account for up to 10% of university income in the future (Leszczensky 2004, p. 24).

Competition clearly exists between institutions in Germany in the acquisition of third-party funding. The introduction of tuition fees will further promote such competition. Within a system of such high dependency on the state subsidy, performance-based allocation systems would offer a particularly effective way to install a further competitive element into the coordination framework. Looking at current methods will provide a touchstone for the current commitment to competition in German higher education.

3. A comparison of the methods of state subsidy allocation and the degree of competition they facilitate

In general, state subsidies in the higher education systems of the sixteen German *Länder* and elsewhere tend not to be allocated as a single block, but comprise one or more of four distinguishable components, which each allocate by a different method and facilitate a different degree of competition. In some systems separate components are used to allocate funding for research and teaching and in others no specific difference between these activities is made.

Indicator-based funding: A university's budget is based on its performance as measured by fixed indicators (e.g., number of graduates) in a formula. Although price-based models exist in theory whereby an increase in an indicator's value results in a proportional change to the calculated state subsidy, most procedures distribute a fixed-budget between institutions and the resulting subsidy is therefore dependent both on the performance of a university and the performance of its direct competitors. Only those models which utilise indicators that measure outputs are truly performance-dependent. Utilising input-based indicators (e.g., number of professors) improves the transparency of the process, but results in an allocation irrespective of the competitive performance of an institution.

Project-based funding (earmarked grants): The basis of this allocation can be diverse. Either a programme initiative is developed by the state (e.g., to increase the participation of non-traditional students, as in England) or institutions are free to develop proposals, which are then evaluated and funded following an affirmative judgement (e.g., for the

development of new research areas, as in Ireland). The former case however, is the most common for components of state subsidy.[4] The criteria for judging a proposal can be a combination of previous performance and a formative judgement on the proposed project. In both cases institutions compete with other grant applicants. Cooperative projects alter the dimensions but not the degree of competition between proposals.

Mission-based funding: The idea behind this component is the search for a consensus between state and university on future policy and institutional goals. Funding for the achievement of these goals is normally laid down in a contract-like agreement and valid for a given number of years. Since the charm of this component is its flexibility, it is difficult to characterise it beyond its benefit of supplying a budget based on common goals. The ultimate achievement of these goals may or may not be measured at the end of the agreement period. In the former case a budget adjustment may be made. Competition between institutions for allocations within this component is not transparent and usually marginal.

Discretionary incremental funding: The extent of central control via the state within this component depends on whether the grant is allocated as a line-item budget with fixed expenditure categories or as a block grant. In the latter case, state control is minimal. The basis for this funding was traditionally the previous year's budget, which was carried forward and at times increased to take account of inflation (incrementalism) or corrected on account of general budget constraints. As higher education reform often entails the abolishment of line-item budgeting, this method of allocating a state subsidy has become increasingly inappropriate, since the basis of the allocated amount cannot be reconstructed at a later date and is not transparent. This component does not facilitate competition between institutions.

Each of these components can be distinguished by the degree of competition or centralised planning it facilitates (see table 2). The real level of competition is dependent on various framework conditions (see below).

4 In Ireland projects are financed through a supplementary funding programme: The Programme for Research in Third-Level Institutions distributed €605 million between 1998 and 2004.

Table 2: Main components of state subsidies to HEIs

High level of direct competition			**High level of centralised budget planning**	
Funding component	*Indicator-based funding*	*Project-based funding (earmarked grants)*	*Mission-based funding*	*Discretionary incremental funding*
Basis of funding	Formulaic measurement of an institution's performance and performance of other competitors using indicators. Output indicators assure a direct measurement of performance.	An institution's (or consortium's) project proposal and competing proposals.	Negotiations between state and individual HEIs.	An institution's previous year's budget.

The proportion of state subsidies allocated by each component for those German *Länder* that implement indicator-based models is shown in table 3. Current funding models in Germany tend to allocate limited specific funding via mission-based agreements – albeit these agreements are an important framework for government steering (Orr and Schwarzenberger 2007) – and so the table indicates solely whether such arrangements are currently in place. Hamburg has recently changed its funding system and allocates about 2% of the state subsidy via mission-based agreements with individual HEIs. Project-based funding is currently not a distinct component of state allocations, but is sometimes included in discretionary budgets.

Table 3: Components of state subsidies to HEIs in Germany and their relative proportion 2005

High level of direct competition ◄			► **High level of centralised budget planning**	
German State	*Indicator-based funding*	*Project-based funding (earmarked grants)*	*Mission-based funding*	*Discretionary incremental funding (approx.)*
	%	*Yes/No*	*Yes/No*	*%*
Baden-Württemberg	20 (28 FH)*	No	No	80 (72 FH)
Bayern	2,4 (0,6 FH)	No	No	97,6 (99,4 FH)
Berlin	15	No	No	85
Brandenburg	95	No	Yes	5
Bremen	5	No	Yes	95
Hamburg	98	No	Yes	2
Hessen	95	No	Yes	5
Niedersachsen	(30 FH)	No	No	(70 FH)
Nordrhein-Westfalen	17	No	Yes	83
Rheinland-Pfalz	95	No	No	5
Thüringen	15	No	Yes	85

Source: Adapted and in some cases updated from Leszczensky and Orr 2004, p. 53.
**FH = Fachhochschulen*

The table shows that the proportion of state subsidies allocated on the basis of indicators varies considerably between the German states (see also Hartwig 2004). The discretionary component remains remarkably high in the majority of states. Brandenburg, Rheinland-Pfalz, Hamburg, and Hessen are exceptions to the general trend and utilise indicator-based funding as the main funding method. However Brandenburg, amongst others, also includes the number of academics as one of its indicators. Since the value of this indicator does not change according to performance, the proportion of state grant allocated by *performance* must be corrected to 70% for the universities and 84% for the *Fachhochschulen* (Leszczensky and Orr 2004, p. 48). Furthermore, in Hessen the performance-based allocation model is currently in a state of review

and may be scaled down following both political and procedural problems.

To put the German situation into perspective, table 4 specifies the proportions allocated by component for a selection of OECD countries.

Table 4: Components of state subsidies to universities in selected OECD countries and their relative proportion 2003

High level of direct competition			*High level of centralised budget planning*	
Country	*Indicator-based funding*	*Project-based funding (earmarked grants)*	*Mission-based funding*	*Discretionary incremental funding*
	%	*%*	*%*	*%*
Australia	94*	6	-	-
England	83	17	-	-
Finland	68	20	-	12
Ireland	63	7	-	30
Norway	60	7	-	33
Sweden	62	-	38	-
Spain (Valencia)	84	-	12	4
Czech Republic	58	30	-	12

**For Australia the pre-funded HECS contributions are counted as state subsidy.*
Source: Leszczensky et al. 2004b, p. 188.

An overview of the components used by other OECD countries and their respective importance for state subsidies highlights a variety of practices. In comparison with the general trend in Germany, it is noticeable that the models shown tend to rely to a lesser extent on non-transparent discretionary budget allocations and more on competitive components. Australia and England have the highest potential for competition in the group and utilise both formulae and project-based funding. However, the real competition between institutions is limited in both these countries. The Australian and English models are driven largely by student numbers, but in neither case are the institutions at complete liberty to determine how many state-funded students they will enrol. Maximum student numbers are negotiated between the state and individual institutions. In Australia these numbers are even determined by subject. However, in contrast to English institutions, their Australian counterparts can enrol

up to 35% more students per course if these students pay the full fee themselves (except in medicine).

A comparison between tables 3 and 4 would suggest that Hamburg, Hessen, Brandenburg, and Rheinland-Pfalz are bucking the national trend to fall in line with international models since the proportion of budget allocated via discretionary components is minimal. However, a closer look at some of the framework conditions affecting German institutions will show that the potential for direct competition between institutions is even more tightly restricted than the examples of Australia and England.

4. General restrictions to competition between institutions in Germany

Jongbloed (2003) has developed a set of conditions necessary for a free higher education market with open competition between institutions. The fulfilment of these conditions results in the elimination of barriers and regulations to a free exchange of resources between suppliers (HEIs) and consumers (students). However, he concludes that this may not be the policy objective of governments (Dill 2003; Leslie and Johnson 1974). It is more likely that governments will minimise their direct influence on higher education systems and individual institutions and instead restrict themselves to determining and supervising the rules of interaction between suppliers and consumers. Jongbloed uses the analogy of a move from traffic lights at an interchange that dictate the movement of traffic based on a fixed timetable to a roundabout, where the movement of traffic is only regulated by two rules: Drive round the roundabout in a set direction and yield to traffic already on the roundabout. This analogy is instructive, because it still allows the state to dictate many rules of exchange. For example, only cars that pass certain standards are allowed to use public roads and only drivers who have passed a test can drive cars. Further, a visitor to England would know that, in some cases, traffic light systems are actually integrated into big roundabouts. This could be taken as an analogy for high priority policy issues necessitating more intervention by the state. Although this paper will not attempt to test the German system for Jongbloed's eight conditions of marketisation, his model raises a number of issues regarding teaching that are highly relevant to current debates in Germany:

- On the supply side, competition between institutions is constrained, as institutions can only partially determine how many students and which students they enrol. Furthermore, certain conditions of provision are regulated from outside the individual institution, thus restricting HEI's efforts to provide courses appropriate to their own 'consumer profile';
- On the demand side, students are restricted in their choice of institution by the application system; their choice is further inhibited by a lack of information on course provisions and their respective quality.

4.1 Supply-side restrictions

Jongbloed sees students as a resource with which HEIs may maintain or enhance their product (2003, p. 118). This is because higher education is a so-called 'customer-input technology'. Regarding teaching, for example, students are not only educated by lecturers or professors, but also by their peers through both in- and out-of-class situations (Harvey and Knight 1996, p. 148). This has significant consequences for providers, since they do not wholly determine the quality and success of higher education processes (compare, for example, research on course dropouts: Heublein et al. 2003). It is therefore in their interest to develop competitive strategies which do not simply aim to increase the number of 'bums on seats', but to acquire those students who best fit their product profile (i.e., research-led, vocational-led, emphasis on natural sciences, etc.). A further requirement for competition is that they should be able to design programmes appropriate to market demand. As Jongbloed recognises, professors are usually given a high degree of freedom in respect to course design, but are subject to certain regulations which guarantee minimum standards for both students and prospective employers. Two methods of setting standards are in fact conceivable: through administrative norms or professional judgements on quality.

In Germany both the freedom of providers to select students and design their programmes are restricted. Indeed these two restrictions are interconnected and relate to the constitutional right of a qualified school graduate to a study place. The possession of an *Abitur* following secondary school is interpreted by the Constitutional Court as giving the bearer the right to study their chosen subject at an institution of their choice (Kluth 2001, p. 46). HEIs are only able to turn qualified students away if their courses are full to capacity, which inhibits their ability to select students most appropriate to their courses. The method by which capacity is calculated also has implications for programme design.

Student selection

Due to the right of a qualified school-leaver to a study place, selection processes have been broadly non-existent until now. Exceptions have been limited principally to courses with an aesthetic orientation where students must supplement their application with a portfolio of work or a display of their talent.

Recently, a report by the German Science Council recommended that HEIs be given the right to select all their students by individual ability and qualifications (WR 2004). This would indeed be a radical reform, but would be relatively difficult to achieve without restricting the constitutional right of qualified applicants to a study place. However, a number of *Länder* have begun to introduce reforms, which would increase the opportunity for HEIs to select appropriate candidates. In Baden-Württemberg, where approximately 11% of all students in Germany study, all HEIs with courses in which demand exceeds capacity must select 90% of student applicants on the basis of procedures that assess qualifications and individual ability (Frankenberg 2004, p. 25). This requirement affects about 60% of study places there. Similar reforms exist in Bavaria and Hamburg.

Study places in subjects for which demand exceeds supply on a national level are administered in Germany by a central agency (*Zentralstelle für die Vergabe von Studienplätzen*), which has until now allocated study places to students on the basis of many factors not directly related to student choice or the preferences of HEIs. In 2003 some thirty-one thousand study places (6% of all new students) were allocated in this way. A reform of this procedure comes into force from winter semester 2005, where:

- 20% of places go to students with the highest Abitur-scores, who can select the HEI of their choice;
- 60% of places will be allocated based on HEIs' individual criteria and procedures; and
- 20% according to waiting lists.

Although this affects only a small proportion of students, it is hoped that it will promote a further reform at the state level and the use of these new freedoms at the institutional level, both of which would be necessary to significantly increase the pro-active autonomy of German HEIs.

Capacity regulations and their implications for programme design

The decision on what capacity a study course at an individual HEI has is taken using normative regulations. As publicly funded institutions, HEIs

are required to fully exploit the resources available to them to maximise student numbers. However, to assure professors' freedom to carry out teaching and research and assure the quality of education for those students already enrolled, normed limits are set via a formula for student capacity on the basis of the so-called "capacity regulation" (*Kapazitätsverordnung*). The normed capacity of a study course at an individual institution is largely based on the number of academic personnel employed (teaching capacity) and the calculated teaching-load required by a course. These two factors dictate the number of students that can be enrolled within capacity boundaries. This administrative framework results in a number of restrictions regarding programme design and provision. Whilst the capacity formula takes the specific didactical models used in the respective subject area into account to calculate course teaching-load and the personnel requirement, it is necessarily based on common practices. The possibilities available to an institution to offer modular courses with innovative teaching techniques such as e-learning and particularly intensive phases of student supervision are restricted by their potential to reproduce these activities in a way that conforms to the formula. Most importantly, efforts to increase supervision (i.e., staff-student ratios) would be represented in the formula as spare capacity for more students. It is important to note that these regulations only apply under certain circumstances; namely, when an HEI restricts the number of applicants to one of its courses. In such a case, applicants have the right to approach the Administrative Court (*Verwaltungsgericht*), who then test the claim that a course is full to capacity on the basis of the set norms. This occurs frequently in popular courses.

The other method of assuring minimum standards, which could eventually offer an alternative to this administrative calculation, is the use of accreditation and evaluation. Whilst a system of accreditation has now been established in Germany, it relates only to new Bachelor- and Masters-courses. Even though Germany is aiming to integrate all higher education courses into this study structure by 2010 and some HEIs have already completed this transition (e.g., Erfurt University), the proportion of Bachelor and Masters courses currently provided in Germany is 16% of all undergraduate courses and 64% of all postgraduate courses (not including PhDs) respectively. On the latest figures roughly 29% of these have completed the procedure of accreditation (Hochschulrektorenkonferenz databank "Hochschulkompass" 2005). Although such a reform would assure the quality of provision, it would not ensure that HEIs are fully exploiting their resources. It has been argued that this condition could be fulfilled through a further development of performance-related funding coupled with individual contracts between state and HEI on the

number of students enrolled (Kluth 2001, p. 92). Both are currently under development in many of the German *Länder*.

4.2 Demand-side restrictions

On the demand side, Jongbloed argues that students must be in a position to select from the various offers made by different HEIs and be sufficiently informed about the courses offered in the market. The previous section showed that the opportunity for students to select their place of study is currently restricted, but that reforms are in place to increase students' influence on the selection of their place of study.

Regarding the amount and quality of information on study courses, their content, and the future prospects of graduates on the job market, empirical studies show that potential students are not satisfied (Lewin et al. 2002). They concur with an OECD expert report on Germany, which criticised advice structures as being too dispersed and overly bureaucratic (WR 2004, p. 11). A report by the German Science Council concludes that relevant information is not reaching potential students to a sufficient degree and consequently, there is an inadequate consciousness of profile differences between individual institutions (ibid, p. 14). Unlike the largely supply-side restrictions, these are not so much due to restrictive regulations as to underdeveloped attitudes. On the positive side, a number of HEIs have implemented successful marketing initiatives and the comparative league tables drawn-up annually by the Centre for Higher Education Development (CHE) are to an increasing extent, consulted by students (Spiewak 2005, p. 79). Nevertheless, the conditions appropriate for competition between HEIs in this area can only be brought about by an improved and concerted effort on all sides.

It is fair to conclude that a reduction in the above restrictions on competition in Germany is being pursued. However, there is a question as to the appropriate degree of competition between institutions in the current transitional phase of German higher education. In this phase, governments are attempting to solve structural problems, which have resulted from previous large-scale higher education expansion without undertaking the necessary system adaptation (Wolter 2004). Unlike the previous examples, where reforming efforts are being made to facilitate competition and allow the proverbial 'invisible hand' to take its course,

these programmes are clear examples of government intervention.[5] Rather than list such programmes by state, it is perhaps more instructive to investigate a single case (Berlin) where a clear conflict between the goals of increasing competition between institutions and government steering of the sector was recently observable.

5. Funding in Berlin within a context of restructuring and budget constraint

Berlin is a particularly good example of system restructuring, budget constraint, and the instruments that are currently being used to steer HEIs towards policy goals of performance and efficiency. Despite having only three universities, Berlin is one of the larger German higher education systems. In 2002, one hundred and thirty-one thousand students, or roughly 7% of the total student population in Germany, studied in Berlin; 93% of students were enrolled in a state university or *Fachhochschule* (see table 5 for further details).

Table 5: Number of students and graduates in Berlin public higher education system 2002

Institution	**No. of students 2002**	**in %**	**Graduates 2002 (rolling av.)***	**in %**
Universities (without medicine)				
Free University	36,724	38%	2,719	39%
Humboldt University	32,018	33%	2,213	32%
Technical University	29,012	30%	2,030	29%
Total universities	*97,754*	*100%*	*6,962*	*100%*

5 Expert Commissions to advise the restructuring of higher education systems have been used in most of the German states in recent years. In many cases they have had significant effects on the size and structure of the systems. In Niedersachsen a so-called Higher Education Optimisation Concept (HOK) was drawn up to facilitate the restructuring of the system and facilitate budget cuts of €50 million by 2007, necessary due to a reduction in the total public budget of the state.

Institution	No. of students 2002	in %	Graduates 2002 (rolling av.)*	in %
Fachhochschulen				
Alice-Salomon FH	1,256	5%	217	6%
Technical and Business FH	8,205	36%	1,226	34%
FH for Administration and Law	2,222	10%	535	15%
FH for Business	3,077	13%	547	15%
Technical FH	8,194	36%	1,109	31%
Total Fachhochschulen	*22,954*	*100%*	*3,634*	*100%*
Grand total	120,708		10,596	

Source: Abgeordnetenhaus von Berlin (2004). Rolling average for universities over two years, for Fachhochschulen over three years.

5.1 Policy framework

Budget constraint

Budget constraint has been one of the main restrictions on higher education policy since the early 1990s, when German Reunification brought East and West Berlin back together and led to the formation of a new higher education system. Previously, the Free University had grown to become one of the biggest universities in West Germany and the Humboldt University had been the elite university in the German Democratic Republic. It was clear that capacity had to be consolidated and subject provision over the whole of the system re-evaluated.

The first budget cuts occurred between 1993 and 2000 and were guided by the double objective of saving by consolidating some courses at particular universities or *Fachhochschulen* and improving the overall efficiency of institutional performance (Abgeordnetenhaus von Berlin 1997). Budget pressure has continued since 2000 and a current agreement between universities, *Fachhochschulen*, and the Berlin Senate stipulates a further budget saving between 2003 and 2005 of over €80 million. A historical comparison between annual total budgets for university and *Fachhochschule* sectors (without medicine) shows a monetary decrease of €81 million – or 8% – in the relevant budgets for 1995 and 2003 (Strobel 2003, p. 29). The total budget for 2003 was one billion Euros.

Student numbers

A significant dimension of budget cuts has been the decrease in planned study places. Originally a reduction from 115,000 to 100,000 was considered, but this figure has lately been further reduced to the current 85,000 planned study places. It was argued that achieving this goal would necessitate reductions in both the numbers of non-academic and professorial staff, but that there was also significant room for improvement in teaching processes themselves, particularly in three areas:

- Some courses suffered from supply and demand matching problems; supply should be reorganised within HEIs to better match the actual needs of prospective students;
- Many students prolonged their studies over the normal study duration for their courses and this led to unnecessary resource expenditure;
- Because of the aforementioned problems, among other things many courses had a high attrition rate, which led to resource wastage.

Recent figures for the years 2000 through 2003 show the current situation in Berlin in the university and *Fachhochschule* sectors (see table 6). The indicators signify a positive matching of supply and demand in both sectors, with values near to or above 100%. The proportion of students successfully completing their courses in Berlin, however, continues to leave much room for improvement, although this reflects a general problem in German higher education and is not specific to Berlin.

Table 6: Selected performance indicators for Berlin HEIs 2000-2003

Indicator	**Higher education sector**	**2000**	**2001**	**2002**	**2003**
Supply and demand quota*	Universities	93%	99%	111%	112 %
	Fachhochschulen	102%	98%	97%	99%
Success rate**	Universities	53%	51%	46%	48%
	Fachhochschulen	60%	58%	59%	66%

**Supply and demand quote: students within normal study duration/number of study places*

***Success rate: total graduates/students per (normed) study year*

Source: Abgeordnetenhaus von Berlin (2004)

Fachhochschule restructuring fund

The indicator for survival rates is more positive for the *Fachhochschulen*, since these institutions are much more focused on teaching and tend to have shorter courses, better supervision, and better advice structures than universities. A long-term plan for Berlin is to increase the proportion of students studying in *Fachhochschulen* and to this end a *Fachhochschule* restructuring fund was established in 2003. Just over €2.5 million are redistributed from the three universities to Berlin's *Fachhochschulen* annually, with the aim of a total investment of €38.4 million after 15 years. To receive funding, the institutions have to propose new innovative study courses, which are evaluated by a group of experts. Courses that are granted funding subsequently have to apply for formal accreditation and – on approval – the project funding flows into their state subsidy permanently. In the first phase of this restructuring initiative (between 2003 and 2005) nearly 2000 new study places have been created in *Fachhochschulen*.

Given the situation sketched above, what degree of competition has been installed between institutions within this framework and is it appropriate? The answer to the first part of this question is to be found in the allocation method for the state subsidy.

5.2 Contract-funding with an element of competition

The current system of funding in Berlin is founded on a consensus between institutions and the state that the financial constraints and restructuring efforts of the state can only be realised if all higher education institutions in Berlin can rely on a degree of financial stability. Indeed leaders of these institutions see the funding contract as an immovable element in the current coordination framework (Leszczensky et al. 2004a, p. 8). At the same time, there is further agreement that funding allocations cannot continue to be based purely on historical budget allocations simply rolled-over into the next year. Even within the current financial straitjacket, an element of performance-based funding is necessary. Berlin, therefore, combines multi-year contracts that declare common policy goals with guaranteed budgets to achieve those goals. One stipulation of the individual contracts is that the individual institutions will take part in a budget redistribution procedure whereby a certain proportion of their promised budget may be lost or supplemented depending on each institution's real performance.

Contract
The first contracts between state and institutions were signed in 1997 and were renewed in 2003 with little change. These contracts lay down a set of policy objectives including:

- Improvement of competitive strategy and development of an individual performance profile (laid down in a strategic plan);
- Improvement of resource efficiency and exploitation of rationalisation potential;
- Reduction in study duration and improvement in student supervision;
- Implementation of internal financial controlling;
- Strengthening cooperation between institutions;
- Gender mainstreaming.

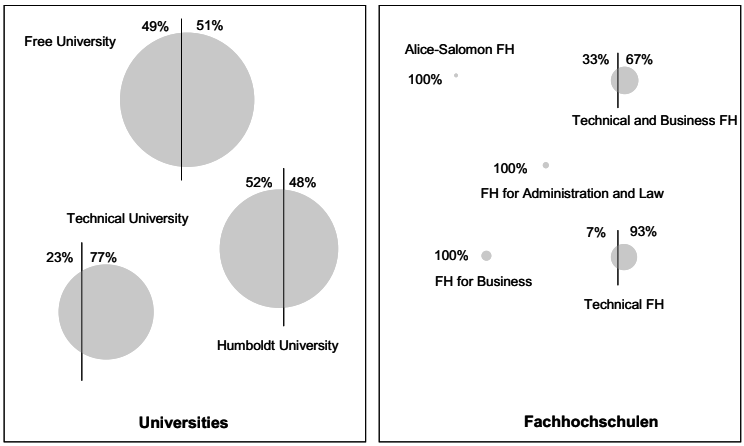
The annual budget of an institution is stipulated in paragraph 1 of the agreement. In paragraph 3 institutions agree to take part in the competitive funding redistribution model. However, it is clearly stated that wins or losses will be calculated each year and the basis for redistribution the following year will be the original budget and not the performance-orientated corrected budget. Therefore, even if an institution loses 5% of its budget in one year, it will still begin the new round of redistribution with 100% of its original budget. This was introduced to prevent a downward spiral, whereby a bad performance in one year is perpetuated by a permanent budget reduction in the following years.

Performance-based funding
As mentioned above, one component of the multi-year contracts is the stipulation of annual budgets. A set percentage is then subtracted from each university's budget and redistributed on the basis of relative performance. This initial budget is discretionary in type and its volume is not based on transparent criteria, but largely on each institution's historical budget. The continued use of rolled-over budgets as a starting point for re-distributional efforts is common in Germany; the underlying philosophy is that these budgets are the result of iterative negotiations between the state and the HEI and therefore reflect institutional costs to some degree.

The performance-based funding component has the explicit objective of recognising competitive strengths and weaknesses among institutions. However, efforts have been made to level the playing field between competitors so that each institution is benchmarked against simi-

lar institutions. This is achieved through a number of stages in the competitive process (see figure 2):

Figure 2: Framework for performance-based funding in Berlin



KEY: bubble size: number of enrolled students; lefthand percentage: budget for subject group humanities and social sciences; righthand percentage: budget for subject group natural and engineering sciences

KEY: bubble size: number of enrolled students; lefthand percentage: budget for subject group social and business sciences; righthand percentage: budget for subject group technical sciences and design

Firstly, universities and *Fachhochschulen* do not compete directly, since they are seen to offer different services with inherently different cost structures.

Secondly, as there are significant differences in performance dimensions between academic disciplines (e.g., success rates, gender performance, and third-party research contracts), only similar disciplines compete directly against each other. To this purpose, academic disciplines have been amalgamated into two subject groups for each institutional type:

- Universities: a) Humanities and social sciences, and b) Natural and engineering sciences;
- Fachhochschulen: a) Social and business sciences, and b) Technical sciences and design.

Competition takes place not between institutions, but between the institutions' subject groups. A consequence is that little further weighting of indicators based on discipline characteristics is necessary, since only similar disciplines compete directly.

Thirdly, as table 5 shows, there are significant differences in institutional size (see also bubble size in figure 2). The majority of indicators used in this funding model are, however, quotas that set measures of in-

put against measures of output. This practice has the advantage of relating outputs to inputs but the disadvantage of leading to values that bear no relation to the volume of output. For example, two thousand students and two hundred graduates give the same quota as twenty thousand students and two thousand graduates, although clearly the latter requires more resources. To solve this problem, relative performance is scaled against the size of an institution's historical budget.

The current model utilises eleven indicators for each institution type and cover comparative quotas for research, teaching, and gender performance. Ultimately, they have been constructed with the aim of encouraging institutions to develop their own performance profile; to bolster their strengths and minimise their weaknesses. In contrast to the funding models in Hamburg and Bremen, however, the set of indicators is fixed and applies to all universities and *Fachhochschulen* in Berlin, as are the weightings of the individual indicators (Leszczensky and Orr 2004).

One example of such a profile is shown in figure 3 for the Free University's two subject groups in 2004. In this year the university gained 6% in this competitive component of its budget or €1.6 million (15% • 6% = 1% gain on total state subsidy). This gain resulted in a proportional loss for the other two universities. Gains and losses in the order of 1% of total state subsidy occurred in both university and *Fachhochschule* sectors and a significantly higher volatility is not currently wished for (Leszczensky et al. 2004a, p. 36, 10).

Figure 3: Performance profile Free University Berlin (2004)

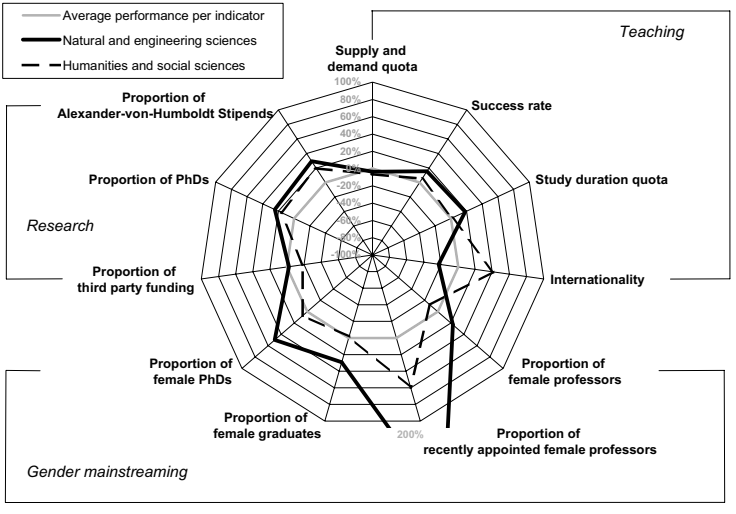


Figure 3 shows comparative strengths (i.e., values above 0% as average performance) inter alia in success rate, study duration quota, proportion of doctorates, and international researchers with stipends from the Alexander-von-Humboldt Foundation. This institution, however, also made a significant gain on the basis of a badly constructed indicator (Leszczensky et al. 2004a, p. 31). When working with small numbers, the proportion of new female professors reacts highly sensitively and in this case the result (+200%) is due to the fact that in the subject group natural and engineering sciences the other two competing universities did not hire a single female professor in the relevant period. This last point highlights the importance of an evaluation of the effects of indicator-based funding methods on a regular basis, to ensure that the intended goals are being reached.

Funding by vouchers?

An analysis of the funding structure in Berlin shows a marginal element of competition between institutions. Recently, a model for funding the institutions in Berlin on the basis of vouchers was proposed by Dohmen (2003). This model would increase competition between institutions as they attempted to increase the proportion of students spending vouchers on their courses. The basis of the transaction would be vouchers related to credits obtained in course modules. This small unit of transaction was chosen to encourage students to pick and mix various modules from different institutions. Apart from the currently restrictive framework conditions for competition in German higher education considered above, the main argument for not finally implementing this model – which was initially hotly debated – was that in no way did it correspond to the basic coordination framework currently in place. In particular, the fixed budgets laid down in the contracts with the state, seen as an important precondition for reform and restructuring efforts, would no longer have any worth. The general consensus, then, was that the restricted degree of competition currently in place remained appropriate for Berlin. The debate on the implementation of tuition fees and vouchers which has re-emerged following the decision of the Constitutional Court allowing such models of cost-sharing will require a reassessment of this decision in the near future.

6. More competition in Germany in the future?

It may seem obvious, but the answer to how much competition should be installed in a higher education system depends on the dominant ap-

proach to higher education coordination in a given context. Seen from the perspective of marketisation, it is a question of the extent with which the state relaxes interventionalist rules. The more this happens, the more important competition between institutions becomes as a framework for coordination. Seen from the perspective of the state, the ultimate question is the extent to which strategic policy goals can be achieved by a competitive mechanism.

Jongbloed sees the ideal compromise between these two views of coordination as the roundabout-analogy, where a minimum set of framework conditions assures the efficiency of the sector's operation. Competitive funding can achieve a lot through careful crafting of the steering mechanisms – for example, through the choice of performance indicators. However, what happens when the inevitable coordination problems occur, for example, as a result of unintended effects?

With regard to Berlin – and more or less generalised for Germany – the state shows little sign of leaving the market to regulate such coordination problems. Competition is used by the state more as an additional lever with which to re-structure German higher education; it is not the dominant force. In Berlin, the performance-based funding method supports the goals of improving efficiency and effectiveness of the institutions' operations by making specific performance measures directly relevant to the ultimate budget, albeit at a low level.

In the medium-term this situation is unlikely to change much since the majority of the *Länder* seem reluctant to give up their powers of intervention in regional higher education systems. A federal initiative to stimulate competition between top universities and research centres in Germany through a national funding programme, which would alleviate some institutions' budget problems, has still to be implemented despite signs of general agreement, because the *Länder* want to retain their sovereignty over regional educational policy. This programme – originally called Brain-Up – would increase the budgets of top universities by up to 10% for five years (Labi 2004).

In the long-term this situation will change as HEIs become more and more exposed to competition from institutions outside their regional context. This may lead to regional states in Germany being relegated to just one agent of many that influence institutions. The progressive Europeanisation and internationalisation of national higher education systems (e.g., Bologna and GATS) will force a relaxation of regulations, which restrict competition between institutions in different countries; HEIs will consequently become more autonomous. Furthermore, the introduction of tuition fees in Germany will certainly strengthen the private voice of students in the higher education system. But will this influence be ulti-

mately good for the system as a whole? This is a question for the public coordination framework (OECD 2004, pp. 22-24).

In this scenario it might be argued that the construction of intelligent systems of public higher education funding may be the most effective way of maintaining a regional influence on higher education institutions. Both competitively allocated and mission-based funds will remain important instruments of government steering. In this case, the proportion of funding based on historical budgets would necessarily decrease, because it is not possible to link this type of funding to specific policy strategies or goals. The task of such public funding will ultimately change, however, since promoting competition between institutions will no longer suffice as a policy task – competition will be a given. It is the state, which is ultimately left with the challenge of detecting and correcting coordination errors in line with higher education policy (Peters 1996, p. 119; OECD 2004, p. 31). This change of approach could be typified by a move from injecting 'the private' into 'the pubic' to injecting 'the public' back into 'the private'.

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