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***Funding Systems
and Their Effects on
Higher Education Systems***

COUNTRY STUDY – AUSTRIA

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Executive Summary

This international OECD/IMHE study deals with the issue of the effects of funding systems on higher education systems. The Austrian study refers to the public university system. At this point in time the implementation of the overall Austrian university reform is under way and experiences with and information on the new funding system vary to a high degree.

The study results are based on a set of 70 personal interviews of representatives of all institutions being affiliated with the university system (defined as “stakeholders” in this study) and responses of 380 so called “Academic Directors” (heads of scientific university units: faculties, departments, institutes) who completed online questionnaires.

A summary of their views and opinions shows the following key results:

- The basic concept of the funding system is mainly positive.
 - The three year global budget is very positive and results in positive effects.
 - Performance agreements as steering instruments, in principle, are positive. However, there is scepticism concerning the future concrete design and management of this instrument.
 - The formula based budget is assessed in widely differing ways, from being “very positive” to “very negative”.
 - The feasibility of measurement, assessment and control of university core tasks in general or for specific core tasks are very difficult challenges.
 - There are too many instruments of accountability and reporting which result in increased work loads for universities (main instruments are: private sector book keeping, performance reports, financial reports, intellectual capital statements). The instruments are assessed in very differentiated ways ranging from “very positive” to “very negative”.
 - The allocation of state funds for specific tasks (in addition to the basic state budget) via peer reviews is an appropriate concept to foster these activities.
- Austrian universities are funded to a high degree (> 90 %) by Federal Government.
 - There is a demand for an increase of state general funds (General budget – negotiated in the performance agreements, 80% of the total budget, and the formula – based portion, 20%) and for state competitive funds (Austrian Science Fund - FWF). Budget increases in recent years have not been perceived as such.
 - In addition, a relative increase of competitive funds as compared to general funds is useful and desirable.
 - The increase of “Third Party Funding” (European Union, industry), in principle, is positive: it results in more open universities (towards business and society) and in increased competition between universities.
 - Study fees are effective, the amount should be differentiated based on different study areas. They are a significant contribution to the university budget.

- The orientation of intra-university funding modes at the overall funding system in principle is functional and effective.
- The overall funding system is useful to support the achievement of university goals.
 - Main university goals are: emphasis on high quality in teaching, research, development and exploitation of the arts (universities of the arts), medical treatment (universities of medicine) and societal responsibilities. All these goals are defined in an international context. In general, the increase of efficiency and effectiveness and the implementation of the new management instruments (as laid down in the University Act of 2002) are seen as major overall goals and challenges.
 - The goals of university reform are supported and promoted by the new funding system (increases in responsibility and autonomy of universities, improvement of efficiency and effectiveness).
- Universities start to think and act in strategic ways.
 - All universities develop new strategies focusing on the development of strategic profiles and of core areas (in teaching and research).
 - In the system there is a sense of a “new era” and “intention to change”.
 - The implementation of private business accounting principles and modes of planning, steering and control is difficult and time consuming. The transition away from cameralistic state accounting system and budgeting modes, in principle is positive.
- First effects of the new funding system on the university system, the single universities themselves and their core tasks are visible already:
 - Depending on interests and perceptions of the interviewees these effects are assessed to be positive or negative: this refers especially to the effects on goals, objectives and tasks, decentralised steering instruments and private business sector principles and instruments.
 - The affiliation of the stakeholders interviewed to a specific institution and their role and position within this institution have little or no effects on their assessment of the funding system.
 - Expected effects are frequently related to desired or feared effects of this not yet profoundly tested system in practice.
 - With respect to the major reform goals of the Austrian system mainly positive effects are anticipated for the near term.

Results indicate differing and also contradicting results concerning design alternatives of the system the study. Change requirements primarily refer to the simplification of the funding instruments and the improvement of the contingencies under which the universities operate and the increase of room to manoeuvre. A large majority of interviewees favours a phase of stability which is viewed to be useful and necessary.

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1 Introduction

The Austrian University Act of 2002 is the basis of a fundamental and complex reform of the university system. Major goals are the increase of autonomy and responsibility of the universities and the improvement of their efficiency and effectiveness.¹ Autonomy and hive-off of the Federal system are accompanied by new management concepts and instruments as especially global budgets, performance agreements, reporting based on private sector business law and new roles and responsibilities for the universities and the Federal Ministry for Education, Science and Culture.² The implementation of the funding system³ is under way at the time of this study.

The funding system and its actual and expected effects are perceived in different ways according to different interests of the various stakeholders. This fact is taken into consideration explicitly in this study which focuses on the respective views and opinions of the stakeholders. Due to the current implementation some elements of the funding system are not yet known in detail and so estimations of future developments of the funding system and their effects are important.

This report is based on personal interviews of 70 stakeholders and an online questionnaire which was answered by 380 academic directors (in universities). It provides a differentiated picture of strengths and weaknesses of the funding system and of its actual and expected effects on the university system, the universities themselves and their core tasks and performance.

The majority of the stakeholders was very interested in this study and provided their experiences, views, assessments and opinions concerning the funding system and its elements. Their contributions are summarised in the „results section“. The conclusions based on the study results refer to general tendencies and selected evaluation criteria and the design of the funding system.

For clarity it is necessary to define the following terms:

- **Stakeholders**

Stakeholders are defined as representatives of institutions which are affiliated with the Austrian university system who have respective knowledge. This notion does not include the Academic Directors within universities.

¹ BMBWK, 2005 (1).

² Kasparovsky/Wadsack, 2004, p. 11.

³ According to an agreement of the OECD project group in this study the term “funding system” is used. This term describes the funding system laid down in the University Act of 2002.

- **Top Management**
Presidents, Vice Presidents (rectors, vice rectors) of the 21 Austrian public universities.
- **Academic Directors**
Academic Directors (Chairs) of scientific units within universities (Faculty, Institute, Department, Senate). They are, of course, also stakeholders, but for reasons of differentiation the term “Academic Directors” is used in this study.
- **Interviewees**
All persons questioned in interviews or in written questionnaires.
- **Ministry**
Federal Ministry for Education, Science and Culture.
- **General Funds, Competitive Funds**
These notions are used for reasons of international comparability.
general funds (2006: € 2.1 billion per annum) are those state funds which have been allocated to the universities since 2004 as global budget (3 years). Beginning in 2007, 80 % of the general funds will be allocated based on the performance agreement and 20 % based on a formula (competitive component).
Competitive funds (€ 310 million annually) are those state funds for which universities and / or academic units have to apply for. This refers as well to state funds (Austrian Science Fund € 80 million) as well to other financing institutions (European Union, territorial authorities, business and industry, foundations).
- **Third Party Resources**
This notion is equivalent to competitive funds
- **Elements of the Funding System**
Elements are performance agreement, formula-based budget, budget volume, reporting system, intellectual capital statement etc.
- **Budget Volume**
The funding volume is defined as budget volume. In principle this notion refers to the volume of the general funds. In the course of the overall system change many budget calculation and allocation modifications have occurred (e.g. building rents, study fees, wages). These – formerly centrally managed budget components – were shifted from the Ministry to the universities. Taking into account these and other factors the total budget volume from 2003 to 2004 was increased by 9.8 %. Taking into account budget cuts 2002/2003 the overall university budget between 2000 and 2005 was increased by about 15.6 %. In 2006 a budget increase of 11 % (based on the 2006 budget) for the period 2007 – 2009 was decided by Parliament. This decision was not known at the time this study was conducted.

2 Results

The main results of this study are shown here according to the core questions of the study. Because of the heterogeneity of the statements a grouping of the views and opinions with reference to stakeholder groups is not possible. No clear and unambiguous relationships between the views and the affiliation to a stakeholder group can be identified. This holds as well for the membership of an organization (e.g. university, ministry) as well for the function within an organization (e.g. university council, rectorate). In a similar way this also holds for a grouping of the views according to the dimensions of discipline, university size and age, regional location etc.

Below the following aspects will be reported based on the stakeholders' perspective:

- The main features of the funding system of higher education
- The interrelationships between the funding system, general policy and strategic goals on three levels: overall university system, single university level, core tasks and functions within the university
- The identified and expected effects of the funding system and its elements on the core tasks – the main focus of the study
- The influence of the funding system on institutional strategies
- The strengths and weaknesses of the funding system

2.1 Main Features of the Funding System of Higher Education

The funding of the Austrian university system is based more than 90 % on a federal state budget.⁴ Other budget sources are mainly supranational institutions, industry and business, private foundations, the overall volume in general is not very high but the importance of these sources varies from university to university.

University funding is state responsibility.⁵ Universities are funded directly through general funds and indirectly via competitive funds through funding institutions based on project applications. The state responsibility of university funding is perceived as a fact: if the budget volume is sufficient or not is seen in differing ways. On the one hand (too) scarce resources are seen as catalyst (for change). On the other hand they are seen as impeding system change. For example, scarce general budgets are seen to be fostering the development of strategic profiles and core areas and the finding of savings and rationalization potentials. On the other hand there are views that resources for university development are missing. However, in

⁴ BMBWK (4), p. 39.

⁵ Only public universities are funded by state.

general, an increase of the overall state budget is being demanded. Increases in budget volume during the last years are mostly not perceived or they are assessed as too small.

Since 2004 universities receive their general funds as a three year global budget which is managed by each university autonomously under its own responsibility. 80 % of this will be based on performance agreements starting from 2007, 20 % will be based on a formula. This general fund is crucial for universities; it constitutes the most important resource. Accountability towards the state and control is based on reports, financial statements and intellectual capital statements. The funding system is depicted in a simplified way in exhibit 1:

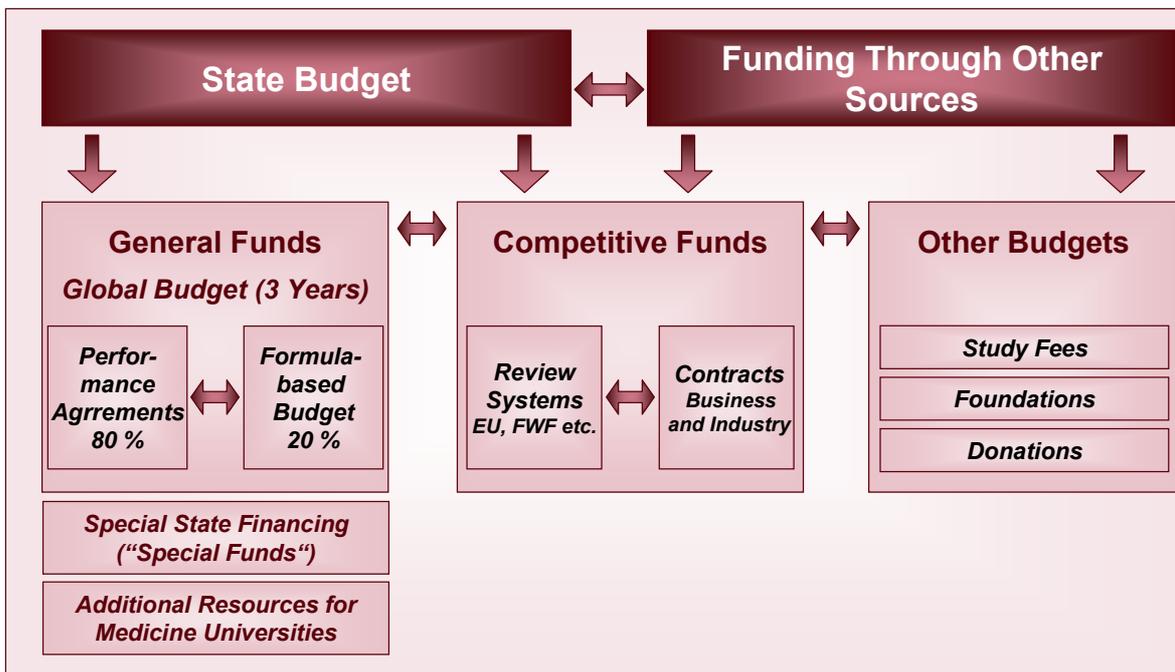


Exhibit 1: Funding system of Austrian universities (simplified illustration)

The competitive allocation of state budget still plays a less important role in Austria as compared to other countries. The main respective institution is the Austrian Science Fund (FWF). Budgets are allocated based on reviews of applications. Other financial sources are generated through contracts with business and industry. The study shows that there is an increasing propensity to generate more additional budget on institute and department levels. This form of financing is perceived as being positive and also necessary.

Other sources are special state financing (“special funds”) and study fees⁶ and possibilities to generate funds from investments and commercialisation of know how or tangible assets.

⁶ Students from developing countries can be released from study fees by university. Students from least developed countries are released from study fees generally.

As an overall picture the majority of the stakeholders assess the funding system as positive or very positive and as a major progress. However, with regard to the assessment of the elements of the funding system opinions and views vary: the general budget in form of a three year global budget is – in principle – seen very positive. The instrument “performance agreement” is assessed positively to a high degree, however, there is scepticism concerning the concrete construction of the agreement and how it will be developed, negotiated and managed in practice. The formula-based part of the general budget is seen in a considerably less positive way. A frequent reason given is the difficulty of measuring and assessing of the university’s output and performance in quantitative terms (e.g. scientific research and development, development and exploitation of the arts). There is a preference for the instrument of peer review which is used for the allocation of the state funding on a competitive basis.

The funding system is assessed by the stakeholders in the following way (Table 1 and Exhibit 2):

Funding System	1	2	3	4	5	not assessed	no answer	total
	very positive	positive	neutral	negative	very negative			
Funding System in General	41	12	6	2	3	2	4	70
	58,6 %	17,1 %	8,6 %	2,9 %	4,3 %	2,9 %	5,6 %	100,0 %
	75,7 %		8,6 %	7,2 %		8,5 %		100,0 %
Global Budget	47	7	1	0	1	0	14	70
	67,2 %	10,0 %	1,4 %	0,0 %	1,4 %	0,0 %	20,0 %	100,0 %
	77,2 %		1,4 %	1,4 %		20,0 %		100,0 %
Performance Agreement	25	6	6	3	1	15	14	70
	35,7 %	8,6 %	8,6 %	4,3 %	1,4 %	21,4 %	20,0 %	100,0 %
	44,3 %		8,6 %	5,7 %		41,4 %		100,0 %
Formula-based Budget	14	12	6	14	8	5	11	70
	20,0 %	17,1 %	8,6 %	20,0 %	11,4 %	7,1 %	15,8 %	100,0 %
	37,1 %		8,6 %	31,4 %		22,9 %		100,0 %

Table 1: Stakeholders’ assessment of the funding system and its elements⁷

Several stakeholders did not judge the funding system, the performance agreement and the formula-based budget. Their argument was that at this point in time the concrete design and the future management in practice are not known yet. This also holds for the interdependencies of the various instruments (e.g. formula-based budget and performance agreement).

⁷ To enable clear classifications varying rating scales are used for the personal interviews (5-point scale) and the online questionnaire (6-point scale).

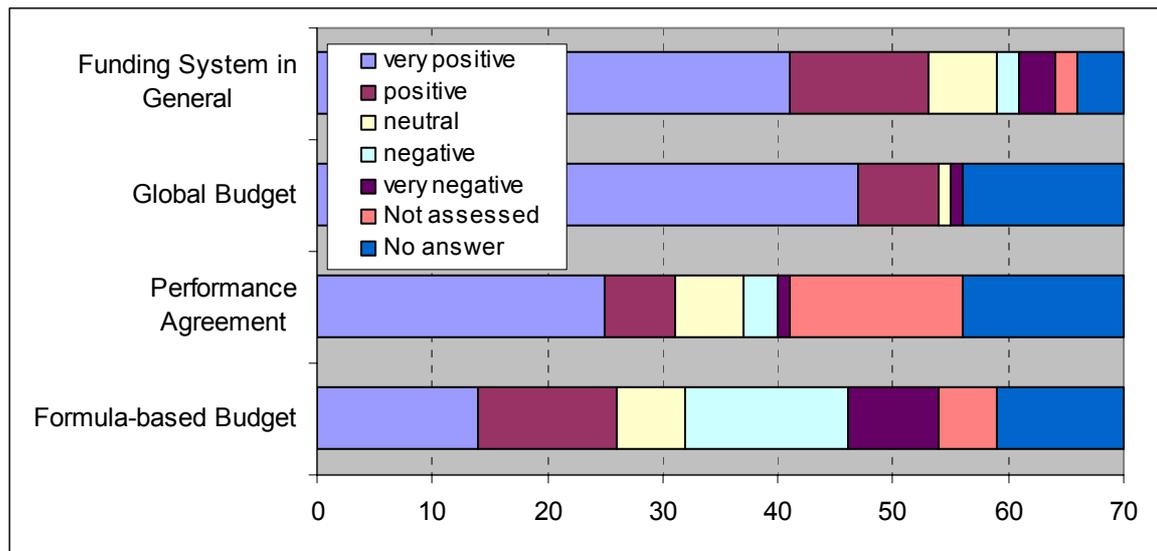


Exhibit 2: Stakeholders' assessment of the funding system and its elements

Academic Directors mostly assess the funding system to be positive; however they view it significantly less positive than do the stakeholders (see Table 2 and Exhibit 3). The reason for this is, that at the time being they locate numerous negative effects. Especially they mention increasing centralisation, increasing administrative burdens and reduced budgets.

The assessment of the funding system by the Academic Directors is related to their views on accountability instruments (performance report, financial statement, intellectual capital statement). A very high degree of bureaucracy is expected because of an increase of administrative tasks at the expense of university core activities.

Funding System	1	2	3	4	5	6	no answer	total
	very positive	positive	rather positive	rather negative	negative	very negative		
Funding System in General	10	37	101	63	19	22	128	380
	2,6 %	9,7 %	26,6 %	16,6 %	5,0 %	5,8 %	33,7 %	100,0 %
	38,9 %			27,4 %			33,7 %	100,0 %
Global Budget	45	80	67	28	19	18	123	380
	11,8 %	21,1 %	17,6 %	7,4 %	5,0 %	4,7 %	32,4 %	100,0 %
	50,5 %			17,1 %			32,4 %	100,0 %
Performance Agreement	29	73	87	39	20	11	121	380
	7,6 %	19,2 %	22,9 %	10,3 %	5,3 %	2,9 %	31,8 %	100,0 %
	49,7 %			18,5 %			31,8 %	100,0 %
Formula-based Budget	9	41	84	74	23	13	136	380
	2,4 %	10,8 %	22,1 %	19,5 %	6,1 %	3,4 %	35,7 %	100,0 %
	35,3 %			29,0 %			35,7 %	100,0 %

Table 2: Academic Directors' assessment of the funding system and its elements

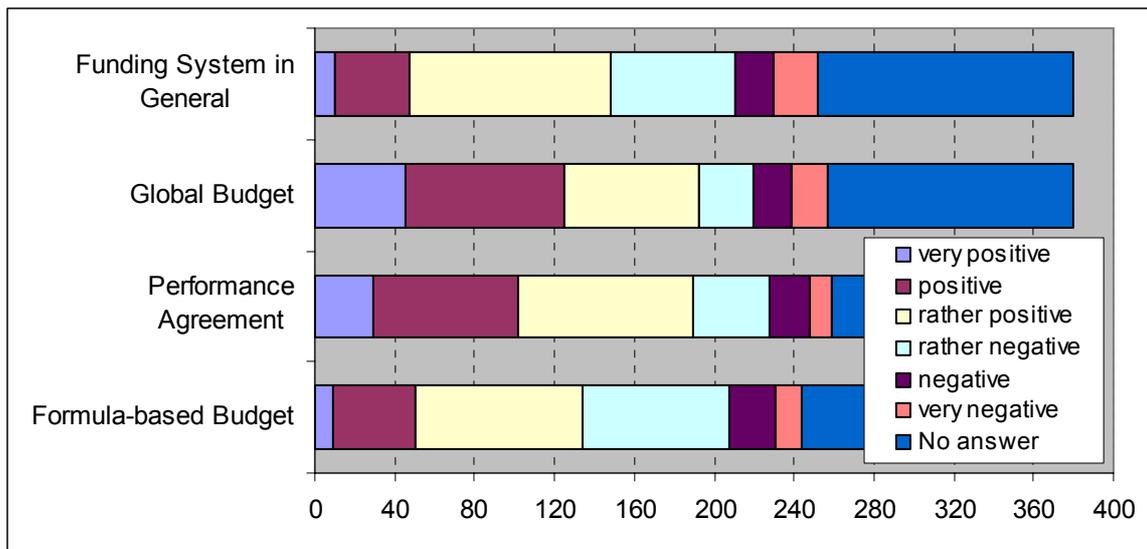


Exhibit 3: Academic Directors' assessment of the funding system and its elements

The turning away from the cameralistic state accounting system is in principle assessed positively. However, it turns out that the implementation of business-like planning, steering and reporting is very difficult and time-consuming. There is the need of changing points of view and of unlearning (forgetting) traditional ways of thinking and behaving and of learning new “rules of the game” and roles. This will take a long time.

The assessment of the funding system and its elements is related to budget volume. Several of those stakeholders who judge the system positively are afraid that intended effects (e.g. strategic profiles, improved performance) cannot be realized because of the low budget volume. There is scepticism as to the effectiveness of performance agreements under the condition of low budgets. Amongst others the question is raised if the increased bureaucratic burden (measurement and assessment of performance) makes sense under the condition of scarce resources.

The orientation of intra-university funding modes at the overall system is seen as being functional and necessary. However, the views concerning the concrete design of these funding modes are very heterogeneous. They differ with respect to funding sources (Federal level, state level, community level, European Union, business and industry, students) and also with respect to the financing instruments e.g. about one third of the Academic Directors of scientific units stated that internal target agreements on goals and objectives are used. The other Academic Directors had no information about it (23.7 %) or didn't respond (31.6 %) to this question. Similar answers were given with respect to the formula-based budget.

Universities differ as to the status and progress of the development and implementation process of the internal funding modes. The process is seen as time-consuming and expensive and hindered by several factors, especially missing information on the future design of instruments (performance agreement) or organisational issues as too low a capability and

willingness of change of many university members and limited legal (e.g. notices) as well as financial (e.g. severance pays) ways of action.

A conclusive evaluation of the funding system and its elements is not possible at this point in time – one will have to wait for the overall implementation and practical experiences in the years to come.

2.2 Formal, Explicitly Stated Interrelationships between the Funding System and National Higher Education Policies

There are general interdependencies between the funding system, government policy and strategic goals. The funding system and its basic design are seen by practically all stakeholders to be suitable for the support of goal achievement. However, an important argument is that this assessment depends on the concrete design and management of the funding instruments, the volume of budget available and the use of the possibilities it offers. A final assessment is not yet possible since the implementation process is on its way at this point in time.

The exhibit below characterises the interdependencies in a simplified form. The overall strategic goals of the university system influence the funding system and the modes of financing the universities. The goals and objectives of the universities and the modes of their financing are interdependent.

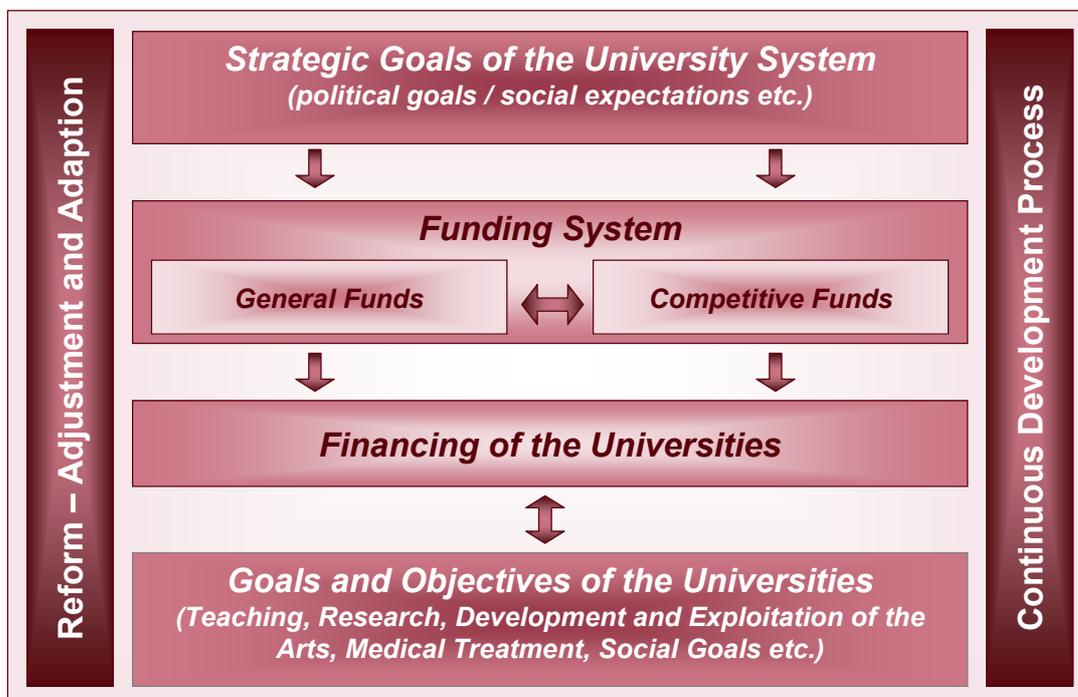


Exhibit 4: Interdependencies between the funding system and goals

The overall goals related to the reform include “increasing responsibility and autonomy of universities” and “improvement of efficiency and effectiveness”.⁸ Especially mentioned are international competitiveness, the attainment and maintaining of international standards and quality assurance through evaluation and continuous improvements.⁹

The goal “increasing responsibility and autonomy of universities” is seen very positively at large. The study results show that the funding system which is based on principles of decentralised and performance oriented steering seems to be adequate to strengthen the autonomy of universities. Restrictive factors include: unknown effects of performance agreements, the (too) low general budgets and other contingencies (e.g. buildings, staff).

The goal “improvement of efficiency and effectiveness” is also seen to be supported by the funding system. However, there are reservations as to measurement and assessment of performance and output especially in the area of research and development and exploitation of the arts. Related to this the suitability of the formula-based part of budget is questioned and there is a preference for the instrument of peer review.

The goals and objectives stated by the stakeholders are based mainly on the goals and tasks as laid down in the University Act 2002. They are focused on an orientation towards internationally high quality standards of the core tasks. There are differences between the universities concerning the concrete design of goals and core tasks.

- *Teaching*: Goals focus on quality improvements and an increase of international orientation as well as the implementation of the Bologna agreement. Continuing education is of minor importance.
- *Research*: Primarily there are qualitative goals and objectives (e.g. excellent results of research) with respect to selected basic and applied research areas.
- *Other goals* encompass the development and exploitation of the arts (universities of the arts) and medical treatment (universities of medicine) or societal responsibilities.

University top managers, of course, list manifold other goals which, in principle, relate to performance improvement, efficiency, rationalisation, increasing synergies. Other specific goals concern the implementation of the instruments required in the University Act 2002.

The majority of the stakeholders consider the funding system to be appropriate for the support of goal achievement. Academic Directors see a major problem in increased bureaucracy (e.g. increased effort for acquisition of third party resources) which is generated within the universities and which hinders efficiency and effectiveness.

⁸ BMBWK, 2005 (1).

⁹ BMBWK (6).

2.3 Intended and Unintended Effects of the Funding System on Higher Education and on the Core Tasks Teaching and Research

First effects can already be observed at this point in time. There is a wide variety of effects since the stakeholders perceive and/or anticipate many different effects and also have different respective judgments. For example, if increasing development of core areas is seen as one effect by some stakeholders, others do not yet see actual effects, but expect those in future years. Generally speaking, increasing development of core areas is seen to be very positive; however there are critical views with reference to reduced breadth and depth.

The stated and expected effects are manifold. In the following table the positive and negative effects are listed.

Positive Effects	Negative Effects
<ul style="list-style-type: none"> ▪ Development of strategic profiles and core areas (teaching and research) ▪ Increased autonomy ▪ Increasing performance orientation and competition between universities ▪ Enhanced internationalisation ▪ Increased efficiency through sensible and prudent resource allocation ▪ Increased effectiveness through performance orientation ▪ Improved output, productivity and research quality ▪ Improved teaching quality ▪ Innovative and practice oriented studies and curricula ▪ Improved transparency concerning the use of resources ▪ Just and fair budget allocation, change of historically grown budgets ▪ Enhanced liquidity, viability and cost consciousness ▪ Increasing third party contracts and resources ▪ Improved cooperation of universities with business, industry and other institutions 	<ul style="list-style-type: none"> ▪ “Mainstream orientation” of universities and their core tasks ▪ Too narrow strategic profiles and core areas ▪ Loss of variety in research and teaching ▪ Danger: Close down of studies not in demand at present or expensive (“unprofitable”) studies ▪ Neglect of basic research and basic development and exploitation of the arts in favour of practice oriented and applied research (third party funding) ▪ Negative steering effects through (wrong) indicators ▪ Lower quality of research and teaching ▪ Loss of autonomy through increased dependence from external principals (third party funding) ▪ Internal centralisation and expansion of administration ▪ Increased administrative burdens at the expense of research and teaching ▪ Reduced coordination (harmonization) between universities because of increased competition

According to the stakeholders the trigger of the effects is the funding system per se but also due to the (too) low budget volume. The cited effects can not be explained exclusively by the funding system: there are multiple relationships and interdependencies with other stipulations of the University Act 2002. In addition other contingencies or general changes in the field are mentioned. No mono-causal relationships between the funding system and its effects can be constructed.

2.4 Influence of the Funding System on Institutional Strategies

Many see the funding system as a major factor of influence on institutional strategies. It is assessed to be positive, neutral or negative: (e.g. university profile development is seen to be positive in terms of overall structural adjustments and negative because of the possible loss of disciplines variety). The influence of the various funding instruments also is assessed in very different ways.¹⁰ The (too) low level of the state budget is seen as well as promoting the university strategy process (e.g. development of profiles and core areas) as well being a hindrance for it.

Increased university autonomy and room for decision making and action (as laid down in the University Act 2002) is seen as the central influencing factor on the development of institutional strategies. However, stakeholders' views differ concerning the question to which extent the autonomy is used by the universities for strategy development and implementation. These differences are related with the question to which extent universities in fact do have room for decision making and to manoeuvre. Restrictions are seen in internal and external contingencies, scarce resources which might destroy the advantages of autonomy.

The extension of the room for decision making and manoeuvring is assessed to be very positive in principle. There are concerns with regard to a lack of an overall "strategic plan for the development of the Austrian university system" and unclear general communication of a policy respectively, as well with regard to the missing coordination between the universities themselves.

The lack of a plan, respectively the unclear communication of a policy has an impact on the strategy development process of the universities and is assessed differently by the stakeholders. On the one hand there are uncertainties with respect to strategy formulation; on the other hand the "bottom-up development process" is seen to be very positive: universities are in the best position themselves to define their competencies and capabilities, to assess their strengths and weaknesses and to develop their respective strategies.

The strategy process varies from university to university. There are differences as well concerning the procedures (e.g. top down – bottom up) as well concerning the variety of the contents and status of progress. They can not be explained by the funding system but seem to stem from the respective contingencies under which each university is operating (structure, culture, management and staff).

With regard to the strategy contents the picture is rather consistent. Strategic thinking is oriented especially on positioning strategies of the university in respect to its products, markets

¹⁰ Similar as discussed in the context of the effects of the funding system the influence of the funding system and its elements on institutional strategies can not be explained independently from other influencing factors.

and target groups. These strategies are interdependent with other strategy areas as is depicted in the exhibit below:

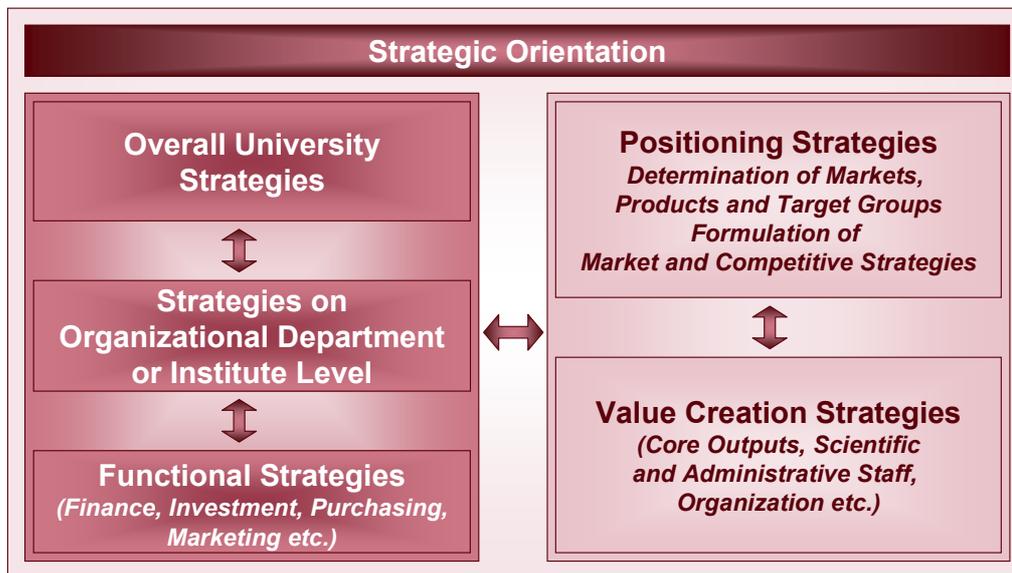


Exhibit 5: Strategies of Austrian universities

The content related emphasis is on core performance and output within the national and international university communities and also for the economy and society. The positioning strategies of universities are related to value creation strategies (e.g. core output, scientific and administrative staff, organization). In this respect there are clear differences between universities. In addition, functional strategies (e.g. financing, purchasing, investment, marketing) are also elements of the overall strategy.

The emphasis is on the development of overall university strategies. “Sub-strategies” on organizational department or institute level at present are of less importance. Reasons are legal requirements and scarce resources.

The strategic orientation is also laid down in the universities’ development plans: most frequent and important is a strategy mix of growth, stabilization and regrouping/retreat strategies. These include the development and enlargement of promising areas and the retreat from areas which do not fit anymore the intended profile of the university. Budget volume plays a major role in these decisions.

As the main determining factors for institutional strategies are seen budget volume and situational factors. The influence of the diverse instruments of the funding system is difficult to assess at this point in time since it depends on the concrete design and implementation which are not completed yet.

2.5 Stakeholders' Views Concerning Strengths and Weaknesses of the Funding System

Concerning strengths and weaknesses of the funding system the stakeholders' views are manifold and differ considerably. Various factors are perceived and assessed in different ways. Therefore, an unambiguous attribution of factors as being a strength or weakness often is difficult or impossible. Examples are: "Funding based on performance/output" is viewed to be conducive for knowledge generation and identified as strength. On the other hand this factor is seen to be a hindrance for critical reflection and analysis of existing knowledge and therefore identified as weakness. On the one side, an increase in output is expected through performance based funding; on the other hand a reduction of quality is feared. Many stakeholders think that performance and output can and must be measured and that performance based funding is effective; however, there is also strong opposition to this view.

Major strengths and weaknesses of the funding system are the following:

Strengths	Weaknesses
<ul style="list-style-type: none"> ▪ Performance orientation and creation of performance incentives ▪ Improvement of planning and steering of the university value chain processes ▪ Fostering of the quality of core tasks (e.g. research, teaching, third party contracts) ▪ Emphasis on relevance of basic and applied research ▪ Enhancement of resource use flexibility ▪ Enlargement of room for decision and manoeuvre ▪ 3 years budget: Increase of planning certainty ▪ Improved efficiency of resource use ▪ Improved resource allocation and change of historically developed resource distribution ▪ Increase of pressures towards change and incentives for the identification of potentials of rationalization and economies ▪ Increase of transparency and understanding of resource distribution ▪ Fostering of the development of profiles and core areas ▪ Autonomous bottom-up development of profiles based on strengths and capabilities ▪ Growth of competition between universities ▪ Improved comparability between universities on national and international level ▪ Promotion of cooperation of universities with industry, business and other institutions 	<ul style="list-style-type: none"> ▪ Scarce resources and lack of finances for the new legal requirements (University Act 2002) result in reduced room for manoeuvre and restricted development opportunities ▪ Increase in administrative workload and bureaucracy ▪ Reduction of flexibility of resource allocation and of room for manoeuvre because of (too) scarce general budgets ▪ Relatively low competitive budget compared to the general budget ▪ Performance measurement based on indicators / ratios <ul style="list-style-type: none"> - funding oriented at the past - incomplete picture of performance - problems with regards to research - danger of steering failures - "Fictitious objectivity" ▪ Problems of measurability and comparison ▪ „Economization“ of science and too strong emphasis on economic aspects ▪ Unfair treatment of small universities, the universities of the arts, of humanities and priority treatment of engineering and natural sciences ▪ Danger of neglect of research ▪ Danger of emphasis on teaching ▪ Lack of super ordinate development of core areas and lack of inter-university coordination ▪ Difficulties of cooperation because of increased competition between universities

3 Conclusions

The conclusions from the study results – the stakeholders' assessments - can be summarized as follows:¹¹ first, general trends are depicted, secondly the assessment criteria of the stakeholders are described and finally, possible design aspects of the funding system are presented.¹²

3.1 General Trends

- The basic conception and design of the funding system in the main is (very) positive.
- Budget allocation on a three year basis is (very) positive.
- The instrument of performance agreement, in principle, is (very) positive.
- The formula-based budget part is assessed in a very differentiated way.
- The allocation of state funds based on a review system for some areas of performance as e.g. basic research is an appropriate instrument.
- Measurement, assessment and control of university core tasks, in general, are viewed to be very difficult challenges.
- The instruments mix of accounting / reporting is too diverse.
- The intra-university design of budget allocation based on the same principles as the funding system is effective.
- The basic funding for the 21 Austrian universities remains state responsibility.
- A budget volume increase of basic and competitive budgets is demanded.
- The relative increase of the state competitive fund as compared to the general budget is effective and desirable respectively.
- Study fees are effective, fee ranges should be differentiated based on different study areas.
- The increase of third party funding is positive: it results in an opening of the universities and more intensive competition.
- The turning away from cameralistic state accounting system, in principle, is positive. The development process towards private business principles of planning, steering and control is difficult.

¹¹ It can not be ruled out that the different assessments are not only caused by different views and opinions or different states of knowledge concerning the funding system and its elements. Maybe other influencing factors like the different survey methods (personal interviews, online questionnaire) or the interview period of several months (May to June 2006) during which elements of the funding system got concretised (e.g. formula-based budget, intellectual capital statement) influenced the assessment.

¹² Due to the current implementation several elements of the funding system have (e.g. global budget, HGB financial statement) been implemented and tested at the time of the survey and others have not (e.g. performance agreement, formula-based budget, intellectual capital statement). Differences in the assessment of the funding system and its elements may also be a result of varying states of knowledge or experience of the stakeholders.

General trends concerning the interrelationship between funding system, its effects and strategic goals are the following:

- There is a positive relationship between the funding system, policy and strategic goals. The basic design of the funding system is appropriate to support university goal attainment.
- The funding system contributes to the strengthening of responsibility and autonomy of the universities and to the improvement of their efficiency and effectiveness.
- The universities' goals are mainly oriented towards high quality standards of the core performance areas (by international comparison).
- Universities are starting to think and act strategically.
- Universities' strategies, at present, are focused on the development of strategic profiles and core areas.
- In the system there is a sense of a "new era" and "intention to change". However, there are manifold obstacles to the implementation of change.
- First effects of the funding system are identified and are assessed in a positive or negative way depending on the stakeholders' positions and interests.
- With regard to the major goals of the university reform (improved efficiency, effectiveness, overall performance) on the whole positive effects are expected in the future.

3.2 Assessment of the Funding System

The assessment of the funding system by the stakeholders is determined by the perceptions concerning the overall purpose, goals and objectives and tasks of the university system and the single university and also the perception of strengths and weaknesses of the governance structures. The same holds for the planning and steering instruments of the funding system. As an overall result it can be stated that there is a direct relationship between the perceptions and views of the system and its evaluation and assessment.

The membership of a specific stakeholder group and institution as well the respective function or position of the interviewees does not – or very little – influence the assessment of the funding system. This is also reflected in the fact that there are very few shared opinions within specific stakeholder groups (e.g. rectors, Academic Directors).

The funding system and its instruments are based on the philosophy of a performance oriented decentralised governance concept. There are differing views concerning the strengths and weaknesses of the degree of decentralisation and centralised steering and control (by government). This is also reflected in the assessment of the system.

3.3 Selected Design Elements

No clear, straightforward recommendations for the design of an "optimal funding system" can be deduced from the study results. The main reasons are the differentiated views and as-

assessments of the stakeholders with regard to overall goals and tasks of universities, the issue of centralized versus decentralized steering, as well their attitudes towards “business type instruments”. Furthermore, there is little concrete experience with the funding system.

In general the majority of the stakeholders is in favour of a phase of stability in which the funding system can be tested. Currently all players concerned are in a learning phase during which further system changes could result in rather negative consequences. The change requirements mostly refer to system simplifications, the improvement of contingencies and the creation of more manoeuvrability.

The most important demands are the following:

- Simplification and focusing of the instruments of accounting and reporting
- Abolishment of the formula-based budget or at least to reduce the formula-based budget volume (20 % of the total budget)
- Introduction of a development plan for the Austrian university system and information about the performance agreement criteria in order to be able to develop strategies
- Increase of state budget volume (Both: general budget and competitive budget)
- Relative increase of the state competitive budget (as compared to the general budget)
- Differentiation of study fees according to study areas (and universities)
- Transparent resource distribution based on understandable and clear criteria (abolishment of “special funds”)
- Improvement of the universities’ capital resources
- Improvement of conditions for third party funding (e.g. tax incentives)
- Enlargement of room to manoeuvre

As a summary, the following design aspects can be derived:

- **Finance Sources**

The increase of the finance volume from other than state sources is generally assessed to be positive. There is scepticism concerning the implications for the performance areas, e.g. emphasis on some areas and neglect of other areas (which might be important for society but are not “profitable”). There are conflicting views as to the (desirable) extent of attainable volume of third party resources. Opportunities to open further sources as e.g. to generate funds from investments and commercialisation of know how or tangible assets are seen to be rather limited. The increase of state competitive budget is favoured by a majority of the stakeholders. It is viewed to be of advantage in the areas of research and the development and exploitation of the arts.

- **Funding Orientation**

Performance oriented funding is a major feature of the funding system, therefore it is focused on university output. However, there are also input-related criteria used to determine the budget volume. There is scepticism concerning the measurability of university outputs and the use of measures as basis for budget volumes. At the present, outcome-

orientation does not play any role: pertinent information can not be generated and there is no experience concerning the effects of the new system.

▪ **Budget Volume**

There is a broad consensus that the state budget volume is low or too low.¹³ There is the demand for an increase in order to perform in sufficient quality and quantity. However, the given budget volume is also seen conducive to the realization of potentials of rationalization, economies and synergies.

▪ **Funding Instruments**

Which instrument is seen to be more appropriate for the allocation of financial resources depends (amongst others) from the question “who has to take when which type of decision”: the formula is based on past decisions on the relationship between funds and performance, resources needed in principle, demand and other criteria. At the time of the calculation of the formula-based budget no decision is taken any more. On the other hand, performance agreements and peer review procedures are determined by decisions of the negotiating parties and the reviewers. A crucial factor is the reference point of time of the instruments (this can be the past, the present or the future), i.e. past performance or input data or future criteria of goals and objectives are used as calculation basis. Another issue is the degree of the specific costs and efforts required for the use of instruments (e.g. transaction costs) and which benefits result. The study results show that peer review procedures are appropriate and effective for research and development and exploitation of the arts. Formula-based budgeting procedures are seen to be appropriate for the area of teaching. The performance agreement is viewed as instrument which, in principle and generally, is useful and effective for resource allocation in decentralised systems.

As overall conclusion it can be stated that in an objective way “the optimal funding system” does not exist and can not exist: the assessment of any system is always dependent from various interests, intended goals and the respective views.

Concerning the design alternatives of the funding system, the study results indicate that there are various and contradicting ways and means. The majority of the interviewees would now prefer a phase of stability and consolidation which is seen to be useful and necessary.

¹³ The budget increase of 11% (based on the 2006 budget) for the period 2007 – 2009 was not known at the time of the survey.

4 General Design and Study Goals

The Austrian country study is part of an international OECD/IMHE study which deals with the issue of the effects of funding systems on higher education systems. Detailed background information about the Austrian Higher Education System can be found e. g. at the internet website of the Federal Ministry for Education, Science and Culture: <http://www.bmbwk.gv.at>.

4.1 Study Context

In Austria there is a wide range of higher education institutions in the post-secondary and tertiary education.¹⁴ In addition to 21 public universities there are 18 Fachhochschulen, numerous colleges as well as 11 private universities.¹⁵

The higher education sector in Austria is currently in a process of fundamental reforms. Since the 90's the autonomy and decision-making power of universities has been continuously increased. The Austrian University Act of 2002 has finally brought institutional autonomy to universities and a fundamental change in roles, tasks etc. Furthermore, with the reform, a new funding system has been introduced. Some of its regulations are already in force (e.g. global budget for three years); others will become relevant during the next years (e.g. formula based budget, performance agreements).¹⁶ Background information about the ongoing reform process offers the following page of the Federal Ministry: http://www.bmbwk.gv.at/universitaeten/pm/publ/Higher_Education_in_Aust6820.xml

4.2 Key Areas

The Austrian study refers to the public university system. This is due to the fact that all other segments are characterised by simple funding systems and a relative low number of students. 84 % of all students are enrolled in public universities, which receive about 93 % of federal state money spend on Higher Education.

All representatives of institutions which are affiliated with the Austrian public university system who have respective knowledge are included in this study. Due to the fact that the new funding system is implemented currently the knowledge and experiences regarding the new funding system and its elements differ and may influence the assessment.

¹⁴ Kasparovsky/Wadsack, 2004, S. 13.

¹⁵ Dillinger-Paller/Schifko, 2006.

¹⁶ BMBWK (5).

4.3 Study Methods

Information from 70 persons interviewed (period of investigation: May - November 2005; duration: 45 minutes to 180 minutes) as well as from 380 online questionnaires (period of investigation: June - July 2005) build the bases for this study (see table 15):

Group	Institution / Stakeholder	Inter-views	Questi-onnaires
State	Austrian Parliament, National Council, Education Committee	1	
	BMBWK (Federal Ministry for Education, Science and Culture)	12	
	BMF (Federal Ministry of Finance)	2	
	BMVIT (Federal Ministry for Transport, Innovation and Techn.)	1	
Universities	University of Vienna	4	42
	University of Graz	1	18
	University of Innsbruck	2	27
	Vienna Medical University	2	5
	Graz Medical University	2	7
	Innsbruck Medical University	1	7
	University of Salzburg	1	13
	Vienna University of Technology	1	21
	Technical University Graz	2	17
	Leoben University of Mining and Metallurgy	2	4
	University of Natural Res. and Applied Life Sciences Vienna	2	11
	The University of Veterinary Medicine in Vienna	2	5
	Vienna University of Economics and Business Administration	2	9
	University of Linz	1	21
	University of Klagenfurt	1	12
	University of Applied Arts in Vienna	1	1
	University of Music and Performing Arts in Vienna	2	6
	University Mozarteum Salzburg	2	4
	University of Music and Drama in Graz	2	2
	University of Art and Industrial Design in Linz	2	1
Academy of Fine Arts in Vienna	1	1	
Not declared			146
Interest Groups	Rectors' Conference	1	
	ÖH (Austrian Union of Students)	1	
	Staff representative bodies	1	
Councils and Funds	Science Council	1	
	Austrian Council for Research and Technology Development	1	
	FWF (Austrian Science Fund)	1	
	FFG (Austrian Research Promotion Agency Ltd.)	1	
	AQA (Austrian Agency for Quality Assurance)	1	
	Austrian Accreditation Council	1	
Experts	Austrian Academy of Science	1	
	IFF (Fakultät f. Interdiszip. Forschung und Fortbildung)	1	
	Kommission für Hochschulmanagement	1	
Social Part-ners	AK (Federal Chamber of Labour)	3	
	WKÖ (Austrian Federal Economic Chamber)	2	
	IV (Federation of Austria Industrialists)	1	
	ÖGB (Austrian Trade Union Federation)	0	
Gesamt		70	380

Table 3: Institutions (Stakeholder) – number of interviews and answered questionnaires

5 Bibliography

- BMBWK (Bundesministerium für Bildung, Wissenschaft und Kultur). 2005 (1):
Universitäten und Hochschulen in Österreich: Reformen 2001.
http://www.bmbwk.gv.at/universitaeten/pm/publ/Universitaeten_und_Hochs5067.xml
[dl: 28.08.2005].
- BMBWK (Bundesministerium für Bildung, Wissenschaft und Kultur). 2005 (2):
Universitätsbudget 2004.
http://www.bmbwk.gv.at/medienpool/10808/unibudget_2004.pdf
[dl: 22.03.2005].
- BMBWK (Bundesministerium für Bildung, Wissenschaft und Kultur). 2005 (3):
Studierende 2004.
http://www.bmbwk.gv.at/medienpool/12407/studierende_04.pdf
[dl: 10.05.2005].
- BMBWK (Bundesministerium für Bildung, Wissenschaft und Kultur). 2005 (4):
Hochschulbericht. Band 2.
http://www.bmbwk.gv.at/medienpool/8331/hb_2002_bd2.pdf
[dl: 10.05.2005].
- BMBWK (Bundesministerium für Bildung, Wissenschaft und Kultur). 2005 (5):
Informationsseite zum Universitätsgesetz 2002:
<http://www.unigesetz.at/html/frameset.html>
[dl: 28.06.2005].
- BMBWK (Bundesministerium für Bildung, Wissenschaft und Kultur). 2005 (6):
Aussendung: Universitätsreform ist ein Meilenstein - Universitätsgesetz 2002 als Grundlage für die
Universität der Zukunft.
http://www.bmbwk.gv.at/universitaeten/pm/Aussendung_Universitaets7091.xml
[dl: 28.06.2005].
- Dillinger-Paller B., Schifko M. 2006: Bildung und Wissenschaft in Österreich. Bundesministerium
für Bildung, Wissenschaft und Kultur
- Kasparovsky H., Wadsack I. 2004: Das österreichische Hochschulsystem.
Bundesministerium für Bildung, Wissenschaft und Kultur.