

WHU-Forschungspapier Nr. 101a
September 2004

Looking for the Academic Fast Track:
An Empirical Investigation of Business School Choice
by Highpotential German Students

von Thomas Hutzschenreuter
Christiane Mück
Stefan Heidrich
Anika Radloff

Wissenschaftliche Hochschule für Unternehmensführung (WHU)
Otto-Beisheim-Hochschule
Burgplatz 2
56179 Vallendar/Rhein

-
- ◆ Prof. Dr. Thomas Hutzschenreuter ist Inhaber des Lehrstuhls für BWL, insbesondere Unternehmensentwicklung und Electronic Media Management (Dietmar-Hopp-Stiftungslehrstuhl) an der WHU. Christiane Mück, Stefan Heidrich und Anika Radloff haben an der WHU studiert.

WHU-Bibliothek



2004/864

**LOOKING FOR THE ACADEMIC FAST TRACK:
AN EMPIRICAL INVESTIGATION OF BUSINESS SCHOOL CHOICE BY HIGH-
POTENTIAL GERMAN STUDENTS**

Abstract

Changes in the regulatory framework allow German business schools to select an important part of their students by themselves for the first time through entrance exams. We analyze if the students participating in these entrance exams differ from average first-year business students and which factors influence their choice of a business school. A separate analysis for a cluster of very highly motivated students reveals that for these students a short study time and a practical orientation are of utmost importance as decision criteria. We derive suggestions for German business schools that want to target this specific segment of students.

INTRODUCTION

The German market for higher education is currently subject to several substantial changes that affect both the supply and the demand side. As it becomes increasingly difficult for the German government to provide adequate resources to continue funding the educational system, institutions in higher education are encouraged by government to compete for scarce public resources as well as to acquire outside funding. We can observe both an impetus towards privatization and a demand for increased responsibility of the single institution. Although these market-like tendencies are common among many countries (Baldwin & James, 2000; Mazzarol & Soutar, 2002), German institutions of higher education seem to be particularly bad prepared.

While in the past the composition of academic programs used to be largely pre-determined by the government, that situation is about to change. The supply side of the German higher education sector is currently composed of two major types of institutions: the traditional universities (*Universität*) offering a focus on academic education and the so-called universities of applied science (*Fachhochschulen*) offering a more practical education with a focus on employability. The creation of a European higher education market as an outcome of the Bologna process and the implementation of the international GATS treaty will have a significant effect on the German higher education sector.¹ A stratified system of academic titles with a Bachelor-Master-logic will lead to a stronger degree of competition among institutions both within the German higher education sector and internationally. In this competitive environment raising the quality of education is the most effective way to justify funding and to give institutions an edge over their competitors (Trogele, 1995). As a result of high quality in teaching, institutions can succeed in the crucial task of attracting highly qualified applicants (Ahola & Kokko, 2001). Higher education being a very complex service, its success is mostly judged in the quality of the graduates it produces, often measured by proxies like starting salaries or the number of job offers. The quality of the graduates, however, depends to a large proportion on the quality of applicants an institution is able to attract and to select.

¹ The Bologna declaration was signed by 29 European countries in 1999 with the goal to harmonize European higher education, e.g. by introducing a compulsory Bachelor-Master-Structure until 2010. The General Agreement on Trade in Services (GATS) is an international treaty managed by the World Trade Organization in order to create world-wide rules for the trade in services, among them education (Knight, 2002).

In the past, most of these institutions in Germany had only limited possibilities to select students, even for highly demanded majors such as medicine, business or psychology. The places for these majors used to be allocated exclusively by a central government authority on the basis of the *Abitur* (high-school leaving exam) grade, the waiting period and social criteria. Considering that the *Länder* (states) and the universities used to circumvent some of these regulations by creating additional majors outside federal regulation, the system was confusing for many prospective students. Only privately financed institutions in higher education had the possibility to choose their students according to their own criteria.

With the 2002 reform of the *Hochschulrahmengesetz*, the federal law regulating public higher education, also German public universities can now pick up to 24% of their students by means of their own admission process. As the business faculties have been severely affected by the growth of the student body in the last decades, they were among the first to implement this possibility. Faculties can now use student selection as a means for increasing the quality of their student inputs.

These transformations will open up possibilities for students to freely choose their university as well. Even though these developments can generally be seen as positive for the students, they will also require them to be more active in gathering and evaluating information about institutions that are attractive for them (Schneider et al., 1998). As education is generally perceived as a service, it exhibits features of an experience good (Nelson, 1970). Prospective students, faced with deciding on serious time and financial investments, have to develop trust in educational institutions by utilizing a specific, very individual set of criteria (Brewer, Gates & Goldman, 2002). Knowledge about students' decision criteria on an individual and aggregate level is therefore vital for targeting attractive segments of potential applicants (Kotler & Fox, 1995).

Identifying and interpreting factors relevant to students' university choice is the subject of this paper, the remainder of which is organized as follows: The second part contains a review of the existing theoretical and empirical literature on factors influencing university choice both in Germany and internationally. We describe our research questions and the design of the empirical study in parts three and four. The results of the empirical study are presented in part five, followed by a discussion and implications for the German higher education sector in the last two parts.

LITERATURE REVIEW: DETERMINANTS OF UNIVERSITY CHOICE

Despite the growing importance of university choice for German higher education institutions and despite the current political and structural changes, the body of empirical literature regarding university choice in Germany is still rather limited. The relevant literature can be divided into (1) the analysis of individual students' characteristics, especially with respect to information gathering, (2) the issue of homogeneity of students willing to perform at demanding universities and (3) the discussion of factors influencing university choice with a focus on Germany. For the purpose of this paper we define universities as both universities and universities of applied science.

Most of the information gathered on university choice stems from surveys conducted with freshmen. The most detailed German survey on an annual basis is done by the University Information System (*Hochschul-Informationssystem* HIS GmbH). As a key finding of the ex-post questioning of first-year students in business and social sciences, the HIS has identified four key factors in prospective students' choice such as the university's general condition, its location, restrictions in the university or the chosen major, and cultural reasons (Lewin et al., 2001; also Lewin, Heublein & Sommer, 2000; Fabel, Lehmann & Warning, 2001). These factors are shown in table 1 (Lewin et al., 2001: 143, 145). It is interesting to see that the two highest-ranked variables are "academic interest" and the "proximity to the students' home town". Therefore, first-year German business students are obviously rather attached to their known surroundings. Findings similar to this nationwide survey have been produced by research about the factors that lead to the choice of certain universities (Gensch & Lullies, 1987; Nietiedt & Meißner, 1995; Schwaiger, 2001; Heine, 2002).

	Importance*
Factor 1: Conditions in the university	42%
Good reputation of university or professors	47%
Broad course offer	45%
Good infrastructure	41%
Small size	50%
Academic interest	78%
Good position in university ranking	30%
Factor 2: Quality of the location	38%
Proximity to previous place of residence	66%
Favorable living conditions	50%
Partner living in the city	36%
Member of the family living in the city	27%
Familiarity with university city	40%
Factor 3: Restrictions of the university	14%
Not selected for preferred university	19%
Special course offer only at this university	24%
Factor 4: Cultural reasons	6%
Offer of leisure activities	37%
Atmosphere in university city	51%

* Ranked as important or very important by x% of the students

Table 1: Factors influencing university choice of German first-year business students

These results can rarely be generalized, however, as they do not include longitudinal studies and – due to the different research designs – allow little comparison between the findings for different universities. Besides, as a free university choice for business majors has only been granted to very well performing high school graduates by the central government authority ZVS (*Zentralstelle zur Vergabe von Studienplätzen*) the use of decision criteria as such is questionable.

Another main point of interest in the Anglo-Saxon literature is whether asymmetrically distributed information keeps the market for higher education from actually being competitive (Levin 1995; Baldwin & James, 2000). Even though the soundness of students' choice evidently depends on the validity of their information, most students do not show significant efforts to even gather the information that is easily obtainable (Bloch, Sherrel & Ridgway, 1986; Tybout & Artz, 1994). Mostly, they rely on quality signals (Nelson, 1970) as well as on university rankings and on accounts given by friends and relatives. The choice of an educa-

tional institution therefore inhibits the typical problems of intangible goods with the absence of objective, reliable performance indicators and the associated problems of finding hard, measurable criteria (Blaug, 1970; Stiglitz, 1974; Belfield, 2000). It is interesting to find out which criteria apply, especially for those students who have the freedom (and are willing) to choose.

However, some applicants gather significantly more information about the market than their peers, thus reducing the asymmetry. These prospective students are called “marginal customers”. They are highly motivated for their future studies and display great interest in the information available on the higher education market (Teske et al., 1993). It is since suggested that educational institutions focus on meeting the needs not of the average, but of the marginal customer, especially considering that they may function as lead or reference customers for a broad majority.

For the purpose of identifying the students who are willing to perform there is a large body of literature about student selection. There is large evidence about the growing concentration of top students at top schools, despite rising tuition fees (Cook & Frank, 1993; McPherson & Schapiro, 1999; Winston, 1999). It is obvious that universities will only engage in student selection if they can obtain a better student output by focusing their education on more gifted students (Rothschild & White, 1993). Thus, attaining the homogeneity of a highly gifted student body at a university is of great importance for the successful completion of studies (Light & Strayer, 2000). In Germany, however, this effect could usually not be observed directly through the market demand for a certain major. However, the preferences for certain universities are revealed by the minimum grade for admission by the *ZVS*: While applicants for the University of Mannheim had to have a very good *Abitur* grade of at least 1.4 to be admitted for business studies, prospective students at the University of Siegen had to merely pass their *Abitur* exam, with an average of 3.8 to be admitted (*ZVS*, 2004).² These entry requirements at some universities indicate the homogenously high academic level of students at these institutions. However, it remains unclear how students respond to selection by the universities themselves.

While the high degree of uncertainty in the centralized German allocation process has hindered in depth research on the topic, there is a substantial amount of literature on the topic focusing on the U.S. and the U.K., some of which will prove relevant for Germany as well. Many studies cover the choice of a certain major and of certain universities by undergraduate

² In the German grading system, 1.0 indicates the best grade, while a grade of 4.0 is pass and 5.0 is fail.

business students (e.g. Mauldin, Crain & Mounce, 2000; Kim, Markham & Cangelosi, 2002). Empirical findings usually stress the importance of employment opportunities and starting salaries as well as family income and student ability as positively related to university choice (Campbell & Siegel, 1967; Bishop, 1977; Fuller, Manski & Wise, 1982; Jantzen, 2000). There are also special studies on the impact of financial aid on enrolment (Kane, 1999; Winston, 2003) and on the racial composition of college freshmen (Blakemore & Low, 1983; Hauser, 1993). While tuition fees and racial issues only play a minor role in Germany, very good students in Germany as well as in the United States are likely to seek admission to institutions with a very high teaching quality and reputation (Cook & Frank, 1993; Koshal & Koshal, 1999). As sex, age and family structure influence university choice in the United States (Blakemore & Low, 1983; Hauser, 1993), they might also explain variations in the German demand for highly competitive institutions.

RESEARCH QUESTIONS

A survey that covers several universities while focusing on the decision criteria of a specific segment of students does not yet exist for the German market. The participants in universities' entrance exams compose an attractive group for these institutions as the opportunity and real costs involved in taking the entrance exam generally indicate a high level of motivation. We therefore examine a specific group of highly motivated students with lead user characteristics and provide first insights into their decision criteria. From the existing literature and the current situation in Germany, we have derived three main questions:

(1) Are there differences between the university applicants for a business degree that take an entrance exam as opposed the average prospective students, especially with regard to information gathering? For the analysis of the first question, we use several hypotheses:

- *The participants of entrance exams differ from the German average with regard to their age, sex, family structure and professional background.* This special segment of students has not yet been the subject of empirical research yet. Compared to data for the German average first-year business student (Lewin et al., 2001), they exhibit a higher determination to study and thus might be younger and have less professional background. Due to the highly demanding studies and the financial investments involved, the proportion of

male students might be higher and the number of siblings smaller (Blakemore & Low, 1983; Hauser, 1993).

- *The participants of entrance exams are highly motivated and capable which can be seen from a significantly better Abitur grade than in the German average.* Entrance exams are a signal of selectivity for prospective students. Very good students tend to target some few elite institutions where they find other members of their intellectual peer group (McPherson & Schapiro, 1999).
- *The participants of entrance exams have a better financial background and have a higher willingness to pay for higher education than the German average.* More able students are generally less price sensitive than other students (Heller, 1997; Belfield, 2000). As some of the surveyed universities charge tuition fees and all programs involve extended stays abroad, less wealthy students might also self-select against an application.
- *The participants of entrance exams use other sources of information than the German average.* As these students have higher time and monetary investments than students allocated by the central authority ZVS, they are better-informed “marginal customers” as they want to found their decision more thoroughly (Teske et al., 1993).

(2) Is the group of participants in entrance exams homogenous? Empirical findings indicate a concentration of talented and wealthy students at top universities (McPherson & Schapiro, 1999). Besides, learning quality is higher and non-completion rates are lower in an environment of academic excellence (Light & Strayer, 2000). Provided that gifted students are attracted by the idea of competing for university admission, it should be possible to find a large group of talented applicants among the participants of entrance exams.

(3) Which factors have significant impact on the university choice of this group and do these differ from the criteria applied by the majority of students? There is vast empirical evidence about the variables and factors that lead to university choice by first-year business students (Lewin et al., 2001). Especially the academic interest and the proximity to the last residence heavily influence this decision. If participants in entrance exams differ from other first-year business students with regard to their personalities (Kotler & Fox, 1995; Lewin et al., 2001) and their information gathering (Teske et al., 1993), they might also have a different set of factors leading to their decision.

METHODOLOGY

In 2003, 31 institutions in German higher education (*Universitäten* and *Fachhochschulen*) asked their prospective business students to take an entrance exam for first-year admission in fall. The expected number of participations was 7,477, which is about 10.9% of all first-year business students (Bundesministerium für Bildung und Forschung, 2002: 174). Seven of these institutions agreed to grant us access to their applicants in the course of the entrance exam, namely the universities of applied science in Aachen, Münster, Osnabrück, Berlin and Frankfurt as well as the private universities in Witten-Herdecke and Vallendar. No public university could

We developed a questionnaire that contained questions about socio-economic data, personality traits and the individual motivation for the choice of a certain university (Lewin/Heublein/Sommer, 2001; Krapp, 2001). As a basis, we mostly used the questionnaire developed by the HIS to make the data comparable to the results for the entirety of German first-year business students (Lewin et al., 2001).

The first part of the questionnaire was dedicated to questions about socio-economic data, such as age, sex, number of siblings, professional experience and *Abitur* grade. In the second part, we used a metric rating scale for the students to assess their position on 17 personality traits from an ungrouped list. These traits were all measured on a five-point Likert scale, with “5” being a very important part and “1” being a negligible part of their personality. In this section, we also asked for their willingness to pay in intervals of € 10,000 as well as for their financial resources. Thirdly, the participants answered to 20 questions on the variables influencing their choice of university, each of which was displayed on a five-point Likert scale. Like for the personality traits, the list of variables was randomly grouped and their importance could be assessed from very high (“5”) to none (“1”). In the last part of the questionnaire, we asked about the influence of different sources of information on the decision for a certain university, again rating from no influence (“1”) to very high influence (“5”).

Before sending the questionnaires to the participating institutions, a pre-test with 30 business students was administered and consequently some questions were altered or clarified. The questionnaires were then handed out after the applicants had taken the written entrance exam on campus. A total of 919 questionnaires were distributed, out of which 649 were returned and usable, providing a very good response rate of 70.6%. For the tests of hypotheses about differences between the participants in entrance exams and average prospective business stu-

dents we used the returned questionnaires. In cases of double participation we only included the first responses, which reduced our sample by 43 (6.6%) to 606 questionnaires. To control for double participation within the entirety of participants in entrance exams, we also reduced our estimated population of 7,477 participations by 465 (6.6%) to 7,012 participants. Although this is only an estimate for the number of double participants, more detailed data was not available from German business schools. As we can see from table 2, in relation to the total estimated number of participants of 7,012, we reached a sample of 606 or 8.6%. For the cluster and factor analyses we excluded double participants and non-completed questionnaires to yield data sets of 459 and 450 questionnaires.

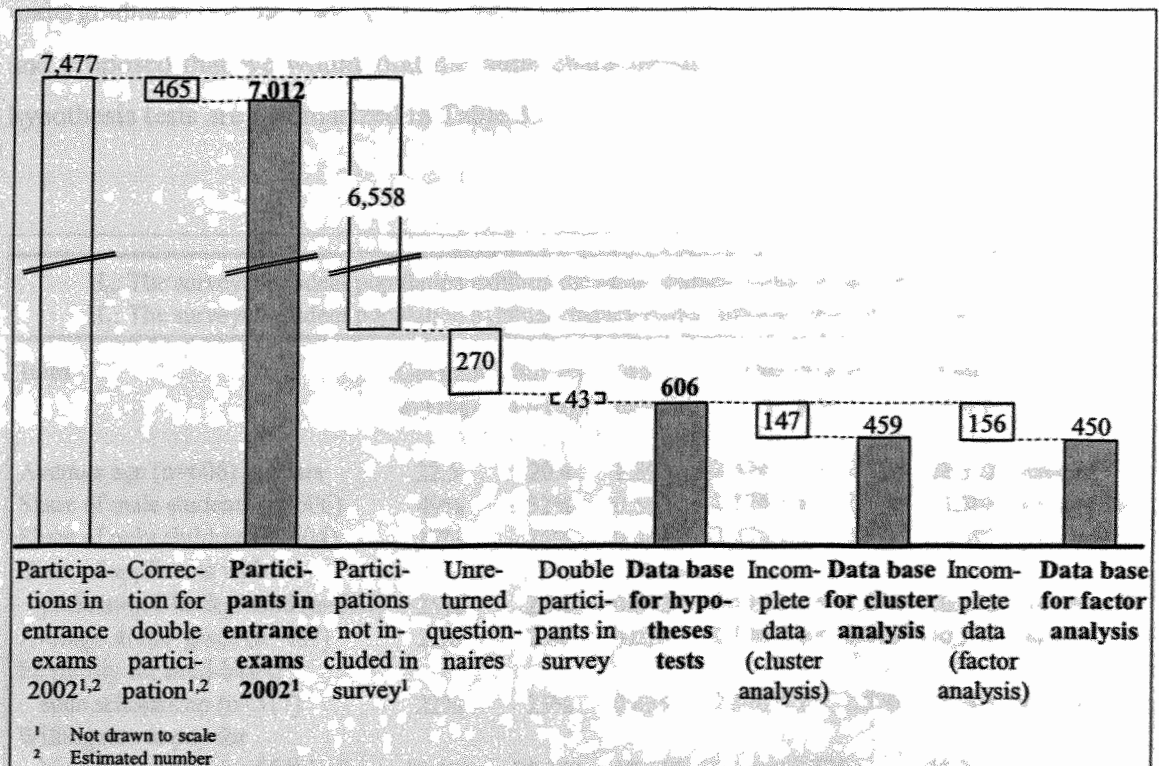


Table 2: Break-down of the surveyed business student population

With this set of data, we first tested the hypotheses derived in part 3 about socio-economic characteristics and informational behavior of the participants. With one exception, we used a two-sided z-test as we had a rather large survey population. We tested on a $\alpha=0.01$ -level (“highly significant”) if the participants in entrance exams differed from the entirety of first-year German business student. We also used a cluster analysis to determine groups of applicants with similar personality traits in order to describe the homogeneity or diversity of the surveyed student population. We used a factor analysis to determine aggregate factors from

the 20 variables influencing the choice of a certain university. Due to the emergence of one large cluster in the cluster analysis, we then repeated the test of hypotheses and the factor analysis for this special cluster.

RESULTS

Test of hypotheses

The statistical analysis of demographic and personal data provided some interesting insights into differences between the participants in entrance exams and the average German business undergraduate. For the testing of our hypotheses, we used data from HIS (Lewin et al., 2001) and proposed that we would find the same characteristics for our sample. The results of the hypothesis tests are summarized in Table 3.

H_0 : The surveyed student population exhibits the same characteristics as the German average. H_1 : The surveyed student population exhibits characteristics different from the German average.						
Item	German average	Survey average	Std. dev.	Theoretical z-value	Emp. z-value	Result: H_0 ...
Average age (n=606) in years	22.5	20.4	1.895	-2.576 < z < 2.576	-28.132	rejected
Share of male students (n=606)	49%	52%	0.500	-2.576 < z < 2.576	1.803	not rejected
Share of only children (n=604)	17%	26%	0.443	-2.576 < z < 2.576	-5.397	rejected
Share of applicants with professional background (n=602)	25%	26%	0.642	-2.576 < z < 2.576	0.642	not rejected
Average <i>Abitur</i> grade (n=487)	2.30	2.04	0.025	-2.576 < z < 2.576	-10.202	rejected
Eligibility for need-based state scholarship (n=517)	22%	25%	0.435	-2.576 < z < 2.576	1.901	not rejected
Willingness to pay for higher education (n=564) in €	10,196	20,337	17,612	z < 2.326	14.258	rejected
Importance as source of information:						
- university rankings (n=520)	3.60	3.67	1.12	-2.576 < z < 2.576	1.501	not rejected
- homepage (n=522)	3.43	3.62	1.07	-2.576 < z < 2.576	4.278	rejected
- printed materials (n=522)	3.42	3.42	1.08	-2.576 < z < 2.576	0.259	not rejected
- current students (n=497)	2.95	3.33	1.30	-2.576 < z < 2.576	6.805	rejected
N=7,012 P<0.01						

Table 3: Test of hypotheses on the characteristics of the student population

Highly significant differences ($\alpha=0.01$) were found with regard to several socio-demographic characteristics as well as to the sources of information. The surveyed applicants were only

20.4 years old and thus significantly younger than the average German first-semester student with an age of 22.5 years. Even considering the 2-4 month time gap between the date of the entrance exam and the start of studies and the possibility that some of the male applicants might still have to do their mandatory military or social service of 7-10 months before starting to study the difference remains huge. The proportion of male students does not differ significantly from the German average so that it is not the reason for the age difference. Another factor contributing to the age difference may be that a significantly lower proportion of the surveyed students had prior work experience. As the separation of sexes is similar to the majority of business students, a higher percentage of females cannot be made responsible for the difference in age.

Concerning the family background 26% of the surveyed applicants are the only children in the family, which is significantly more than the average of German students. Besides, significantly more students than the average are willing to pay for higher education, which might hint either to a sound financial background of the families or to a high perceived value of education. However, the eligibility for need-based state grants is not higher than for the average German student so that in case of tuition fees some of these highly motivated students would try to finance their studies through a student loan or by working part-time. A high willingness to perform and the necessary talent can be deduced from the fact that the participants in entrance exams have an average *Abitur* grade of 2.08 which is significantly better than the average business first year student with an *Abitur* grade of 2.30.

With respect to the media used by prospective students to gather information about their future alma mater the participants in entrance exams exhibit a different behavior than the German average. They use university homepages significantly more often as a source of information and they rely more heavily on the opinion of current students when choosing their university. The use of university rankings and printed information material, however, is not significantly different from average.

The results of the hypothesis tests show a clear answer to the first research question. The students participating in entrance exams differ significantly from the German average. Not only are they highly motivated and talented, but they also rely on other sources of information than the German average.

Cluster Analysis

Although the group of participants in entrance exams seems to differ from the average first year students with regard to several characteristics, we hypothesize that there are also differences among the students in the former group. Besides the 17 personality traits, we also used the variables “Willingness to pay” and “(Expected) *Abitur* grade” for the cluster analysis. Out of 649 questionnaires, we could only use 459 for the cluster analysis as some students participated in more than one entrance exam and some questionnaires were not filled in completely (see table 2). We first performed a single linkage algorithm based on Euclidian distance to identify six runaways. The 453 remaining questionnaires were computed in a ward linkage algorithm to form clusters. The result of a scree test (Catell, 1966) was an optimal number of three clusters that are displayed in table 4. The shaded items mark positive t-values, thus indicating variables that are over-represented in this cluster compared to the surveyed population of students. These variables are therefore very characteristic for the students in this cluster. We also show F-values for each variable in order to compare the variance of this variable in the cluster with the variance in the entire population. It is desirable to have F-values smaller than 1 in the clusters as this is a sign for the homogeneity of the cluster’s elements. As we only have few F-values larger than 1 in the table, we can assume that the students in the clusters exhibit rather similar characteristics.

We found three distinct clusters of students with a high degree of homogeneity within the clusters. Cluster 1 contained 169 students (37%) with a broad interest and an *Abitur* grade of 2.21 that is similar to the German average of 2.3. These students are especially interested in cultural issues and describe themselves as creative. This talent, however, is rather focused on qualitative science as we have also computed an F-value of 1.0047 for analytic abilities, thus indicating a broad range of analytic capabilities in this group. Those students seem attractive for universities with a broad scope apart from business studies.

Variables	Cluster 1 (169 students)			Cluster 2 (254 students)			Cluster 3 (30 students)		
	Mean	t-Value	F-Value	Mean	t-Value	F-Value	Mean	t-Value	F-Value
career-minded	3.5740	-0.2175	0.7857	4.0984	0.3697	0.6268	2.0667	-1.9049	0.3400
socially minded	3.0000	-0.2522	0.8797	3.4685	0.2257	1.0171	2.7667	-0.4903	0.5515
capable	3.7160	-0.1744	0.5361	4.1772	0.3890	0.5840	1.9667	-2.3111	0.3584
team player	3.7396	-0.0098	0.7200	3.9370	0.2134	0.8141	2.2000	-1.7513	0.7411
timid/reserved	2.6686	0.2763	0.8877	2.1102	-0.2971	0.8707	3.3333	0.9588	0.6787
curious	4.0178	0.1182	0.6168	4.0669	0.1719	0.7342	1.9667	-2.1209	0.6150
gifted for languages	3.7929	0.0517	0.8857	3.8976	0.1621	0.7798	2.1667	-1.6636	0.5435
mathematically gifted	3.0118	-0.3380	1.0047	3.6693	0.3172	0.7073	2.5667	-0.7816	1.4164
stress resistant	3.2604	-0.3098	0.8502	3.9370	0.4148	0.5575	1.9000	-1.7666	0.5022
family person	3.3846	-0.0432	1.1324	3.5472	0.1178	0.8719	2.6667	-0.7542	0.6989
creative	3.3550	0.1280	0.9644	3.1811	-0.0434	1.0283	2.8667	-0.3534	0.7865
communicative	3.7692	-0.1686	0.7120	4.2520	0.3541	0.6020	2.0333	-2.0484	0.6052
talent for organizing	3.6923	-0.2091	0.6927	4.2362	0.3609	0.6415	2.1000	-1.8775	0.9351
analytically gifted	3.1183	-0.3388	0.8634	3.7677	0.3762	0.7155	2.2667	-1.2767	0.7470
interested in culture	4.0414	0.3659	0.6064	3.5079	-0.1051	1.0273	2.3000	-1.1714	0.8143
keen on sports	3.7456	0.0091	0.8062	3.9567	0.1933	0.7953	1.8000	-1.6877	0.7030
patient	3.0828	0.0098	0.9694	3.1181	0.0445	1.0311	2.6333	-0.4317	0.7639
Abitur grade	2.2107	0.3018	0.9278	1.9276	-0.1917	0.9305	1.9933	-0.0771	1.2346
Willingness to pay	1.6982	-0.4298	0.6377	3.0433	0.3148	1.0375	2.0333	-0.2443	0.8345
Cluster characterization	Broad range of interests with Abitur grade equal to average			High intellectual capability with high willingness to pay			Timid and reserved		

Table 4: Results of the cluster analysis

Cluster 2 contained 254 highly communicative students with a high willingness to perform and a high willingness to pay. As this group constitutes 56% of the total, students with these characteristics seem to be especially attracted by entrance exams. These students are characterized by strong communication skills, by a talent for organizing and by a strong focus on their careers. Within the cluster, the personality traits “socially minded”, “creative” and “interested in culture” have a larger variance than in the surveyed population (F-values of 1.0171, 1.0283 and 1.0273) thus indicating that to some of these students cultural and social issues are relatively unimportant. Overall, these students seem to be especially attractive for universities that value determination, talent and perseverance.

Cluster 3 unites 30 students (7%) who describe themselves as timid and reserved. The variables “capable” (1.97) and “career-minded” (2.07) have rather low mean values which describes students who are unsure of their abilities. Within this cluster, the variables “analytically gifted” (F-value: 1.4164) and “Abitur grade” (F-value: 1.2346) have a much higher variance than in the surveyed student population. As these characteristics are rather weak and the group of students is comparatively small, no recommendations for universities can be derived

with regard to these students.

Judging from the results of the cluster analysis, the surveyed student population is rather homogenous with some differences. With an optimal number of only three clusters, the emergence of one large cluster had to be expected. It is also not surprising that the personality traits in cluster 2 are those that might generally characterize the participants in entrance exams as opposed to the average students.

Factor analysis

We used a factor analysis as an explorative tool to determine the factors influencing university choice for the participants in entrance exams. We compare our results with research about the factors influencing university choice for German business students in general as seen in table 1.

As a basis, we took the answers to the questions on the motives for university choice. Out of 649 questionnaires, we had to exclude 43 for double participation and 156 for non-completion (see table 2). The remaining 450 data sets were tested for their suitability for a factor analysis. Our set of data exhibits a high suitability for a factor analysis with the measure of sampling adequacy (Kaiser & Rice, 1974) at a level of 0,84 (“meritorious”) and an anti-image-covariance matrix with only 6% of the elements outside of the main diagonal larger than 0,09 (Guttman, 1953; Dziuban & Shirkey, 1974).

After standardizing the variables to z-values, we computed eigenvalues for all factors and found an optimal number of five factors by means of a scree test (Catell, 1966). A Varimax-rotation of the component matrix and an extraction by principal component analysis yielded five factors with rather high eigenvalues and a total 53% of explained variance in the surveyed population. The results are shown in table 5.

Internationality is the most important factor for university choice (15.6% of explained variance) and is determined by the elements “quality of exchange universities”, “integration of studies abroad”, “number of exchange places” and “double degree program”. Other important factors are the quality of studies (11.3% of explained variance), the university’s image (8.8%), a broad range of extracurricular activities (8.7%) as well as costs of studying and the location (8.6%) of the university.

	Components					Mean	Eigen-values	Explained variance
	1	2	3	4	5			
Factor 1: Internationality						4.15	3.12	15.6%
Quality of exchange coop.	0.711	0.293	0.088	0.150	-0.011	4.45		
Integrated studies abroad	0.748	0.362	0.015	-0.027	-0.049	4.50		
Number of exchange places	0.672	0.063	0.201	0.236	0.048	3.91		
Double degree program	0.668	-0.022	-0.071	-0.141	0.167	3.73		
Factor 2: Quality of studies						4.14	2.25	11.3%
Job offers after completion	0.156	0.659	0.203	0.036	0.061	4.48		
Quality of studies	0.229	0.548	0.187	0.334	-0.012	4.48		
Good professors	0.138	0.593	0.367	0.319	0.100	4.16		
Practical orientation	0.072	0.761	-0.133	-0.031	0.077	4.11		
Students per professor	0.010	0.523	0.143	0.386	-0.198	3.96		
Short study time	0.178	0.491	0.263	0.034	0.053	3.98		
University infrastructure	0.092	0.564	0.242	0.036	0.288	3.79		
Factor 3: Image						3.70	1.76	8.8%
Reputation of the university	0.122	0.356	0.668	0.189	-0.018	3.87		
Position in university ranking	0.043	0.142	0.761	-0.103	0.072	3.52		
Factor 4: Additional academic offers						3.45	1.74	8.7%
Broad course offer	0.215	-0.020	-0.080	0.692	0.163	3.52		
General course offer	-0.107	0.170	0.044	0.745	0.072	3.37		
Factor 5: Finance/location						3.30	1.73	8.6%
Friendly students	0.012	0.269	0.369	0.314	0.406	3.63		
(Acceptable) tuition fees	0.123	0.328	-0.285	0.100	0.373	3.49		
Attractiveness of city	0.198	-0.046	0.103	0.014	0.725	3.27		
Offer of leisure activities	0.060	0.204	0.132	0.294	0.481	3.25		
Easy to reach	-0.113	-0.050	-0.131	-0.011	0.697	2.86		

Table 5: Results of the factor analysis for the surveyed student population

In comparison to the decision criteria of the German average in table 1, our surveyed population is especially interested in the international aspect of business studies. The comparative irrelevance of location and financial aspects is also different from the German average.

Analysis of the highly motivated students in cluster 2

As the highly motivated and affluent students in cluster 2 constitute more than half of the questionnaires used for the cluster analysis, we decided to further analyze this group that is possibly very attractive to universities. We hypothesize that the share of students in cluster 2 is equal in the surveyed student population (39.1%) and in the entire student population. Our estimated population of students in cluster 2 is therefore 2,744 or 39.1% of the total number of participants of 7,012. Again, all hypotheses are tested on the $\alpha=0.01$ -level. As these students have been put in the same cluster we are not surprised that some of their characteristics differ significantly in some regards from the total of the surveyed student population.

H_0 : The students in cluster 2 exhibit the same characteristics as the surveyed student population. H_1 : The students in cluster 2 exhibit characteristics different from the surveyed student population.						
Item	Survey average	Cluster 2 average	Std. dev.	Theoretical z-value	Emp. z-value	Result: H_0 ...
Average age (n=254) in years	20.4	20.1	1.519	-2.576 < z < 2.576	-3.861	rejected
Share of male students (n=254)	52%	57%	0.496	-2.576 < z < 2.576	1.547	not rejected
Share of only children (n=254)	26%	23%	0.422	-2.576 < z < 2.576	1.420	not rejected
Share of applicants with professional background (n=252)	23%	24%	0.427	-2.576 < z < 2.576	-0.055	not rejected
Average <i>Abitur</i> grade (n=254)	2.04	1.93	0.552	-2.576 < z < 2.576	-3.407	rejected
Eligibility for need-based state scholarship (n=237)	25%	23%	0.421	-2.576 < z < 2.576	-1.041	not rejected
Willingness to pay for higher education (n=254) in €	20,337	27,595	17,875	z < 2.326	6.792	rejected
Importance as source of information:						
- university rankings (n=233)	3.67	3.85	1.00	-2.576 < z < 2.576	2.877	rejected
- homepage (n=233)	3.62	3.52	1.06	-2.576 < z < 2.576	-1.509	not rejected
- printed materials (n=231)	3.42	3.42	1.09	-2.576 < z < 2.576	-0.113	not rejected
- current students (n=227)	3.33	3.34	1.30	-2.576 < z < 2.576	0.075	not rejected
N=2,744 P<0.01						

Table 6: Test of hypotheses on the characteristics of students in cluster 2

From table 6 we can see that the students in cluster 2 are significantly younger than the average of the survey (20.1 vs. 20.4 years). They also have a significantly better *Abitur* grade (1.93 vs. 2.08), this being a sign of their greater intellectual capabilities. The self-assessed eligibility for a need-based state scholarship is not significantly different from the survey average while the willingness to pay is significantly higher, reaching € 27,600 for a four-year course at university. As German university education is usually free of charge, this amount is a sign of both the value of education to this particular group and the relative wealth of these students. The importance of different media to obtain information about their university of choice is equal to the surveyed student population with the exception of university rankings that are significantly more important.

We also computed a separate factor analysis for cluster 2 in order to find parallels and differences with regard to decision criteria of university choice. The factor analysis for cluster 2 also yields a five-factor solution, but as we can see from table 7 a slightly different set of factors is extracted. The eigenvalues and explained variances after rotation are slightly lower than for the entire student population, but a cumulated explained variance of 50.3% is still acceptable.

	Components					Mean	Eigen-values	Explained variance
	1	2	3	4	5			
Factor 1: Practical orientation and short study time						4.20	2.87	14.4%
Practical orientation	0.741	0.020	0.090	0.076	0.097	4.21		
Short study time	0.489	0.137	0.358	0.049	-0.043	4.18		
Factor 2: Internationality						4.18	2.07	10.3%
Integrated studies abroad	0.233	0.745	0.106	-0.111	-0.022	4.56		
Quality of exchange coop.	0.066	0.716	0.082	0.171	-0.120	4.53		
Number of exchange places	-0.226	0.666	0.266	0.140	0.022	3.96		
Double degree program	0.125	0.597	-0.107	-0.234	0.258	3.66		
Factor 3: Quality of study						4.13	1.877	9.4%
Quality of studies	0.165	0.129	0.490	0.231	-0.087	4.63		
Job offers after completion	0.398	0.118	0.413	-0.057	0.026	4.60		
Good professors	0.090	0.068	0.656	-0.327	-0.084	4.28		
Reputation of the university	0.119	0.095	0.717	0.054	-0.205	4.03		
University infrastructure	0.061	0.050	0.687	-0.067	0.320	3.92		
Friendly students	-0.188	-0.015	0.584	0.266	0.357	3.73		
Position in university ranking	0.274	0.012	0.472	-0.122	-0.198	3.42		
Factor 4: Broad offer of courses						3.68	1.742	8.7%
Students per professor	0.345	-0.046	0.161	0.532	-0.220	4.12		
Broad course offer	-0.131	0.185	0.103	0.616	0.181	3.50		
General course offer	0.083	-0.128	0.050	0.092	0.092	3.42		
Factor 5: Location						3.19	1.525	7.5%
(Acceptable) tuition fees	0.301	0.206	-0.039	0.212	0.403	3.40		
Offer of leisure activities	0.114	0.011	0.367	0.259	0.481	3.31		
Attractiveness of city	-0.093	0.081	0.031	-0.034	0.735	3.24		
Easy to reach	0.051	-0.183	-0.287	-0.005	0.659	2.79		

Table 7: Results of the factor analysis for applicants in cluster 2

Most important is a factor containing practical orientation and a short study time (14.4% of explained variance). Internationality (10.3%), quality of studies (9.4%), a broad set of activities (8.7%) and the university's location (7.5%) are the other factors important to the segment of high-performing students. Interestingly, this segment of students values practical orientation and a short study time higher than academic quality or reputation. The university's image could not be identified as a distinct factor that influences the decisions of this group. Although they have a significantly higher interest in the results of university rankings, they appear to have a stronger tendency to make their decision on "objective" criteria like the length of study and the quality of international co-operations.

DISCUSSION AND IMPLICATIONS

Our goal was to provide first insights into the criteria of university choice by high-potential German students participating in entrance exams administered by the universities. We found highly significant differences between our survey population and the German average especially in the fields of intellectual capabilities, average age and willingness to pay for higher education. The group, however, is rather diverse so that we were able to find three distinctive

clusters, one of them evoking the expected image of an even younger, brighter and more affluent applicant. The factors influencing university choice show the determination of the students in our sample to study abroad and to gather work experience: Internationality, practical training and a short study time were among the most important factors. Unlike for the majority of German business students, the proximity to the family is not an overriding factor in university choice for this group.

This study has some limitations that lie in the general nature of empirical research and questionnaire design. First, only 8,7% of all participants in entrance exams in 2003 have been accessible for our survey. We can only assume that this group is representative for the participants in entrance exams in general but cannot provide empirical proof. Especially the absence of applicants from public universities is regrettable. Future studies should therefore enlarge their sample and provide a better representativeness. Second, the study implicitly assumes that students are also well informed about the topics they deem important. However, other studies (James, Baldwin & McInnis 1999) suggest that there may be huge differences between the general importance of factors and the willingness to be informed about them. Although this may also be true for the surveyed group the fact that they prefer different media to gather information than the average might hint to that they have at least considered these media. Besides, an objective assessment of the information quality could hardly have been carried out. Third, the comparison to the German average might be misleading for some institutions. Some public universities with a good reputation were able to use the federal admission board very effectively to channel high-potential demand so that their student body already contains very gifted students.

In times of structural change, universities have to be prepared for fierce competition for inputs both financial and human. High-potential students are one of the major assets a university can acquire during this transformation. Our study has revealed that some universities are already in touch with these students through entrance exams. Knowing their decision criteria for the choice of a university provide the institutions in higher education with a possibility to actively target these needs.

This process has both a program and a communication component. We found that internationality, time of study and study quality are important factors to highly motivated students so universities should try to integrate these elements in their programs structures. However, the communicative aspect is often much more important. Universities need to provide specific information to specific prospective customers in order to appeal to them. The current ap-

proach of being “all things to all people” (Baldwin & James, 2000: 146) may not deter a certain group of students, but it also has limited appeal to a specialized segment. Universities should therefore use every possibility to signal that they care about the needs of the students-customers.

References

- Ahola, S., & Kokko, A. 2001. Finding the best possible student: student selection and its problems in the field of business. Journal of Higher Education Policy and Management, 23(2): 191-203.
- Baldwin, G., & James, R. 2000. The Market in Australian Higher Education and the Concept of the Student as Informed Customer. Journal of Higher Education Policy and Management, 22(2): 139-148.
- Belfield, C. R. 2000. Economic Principles for Education: Theory and Evidence. Cheltenham: Edward Elgar.
- Bishop, J. 1977. The effect of public policies on the demand for higher education. The Journal of Human Resources, 7(3): 285-307.
- Blakemore, A. E., & Low, S. A. 1983. Scholarship policy and race – sex differences in the demand for higher education. Economic Inquiry, 21: 504-519.
- Blaug, M. 1970. An Introduction of the Economics of Education. London: Gregg Revivals.
- Brewer, D. J., Gates, S. M., & Goldman, C. A. 2002. In pursuit of prestige: strategy and competition in U.S. higher education. New Brunswick, NJ: Transaction.
- Bloch, P., Sherrel, D., & Ridgway, N. 1986. Consumer search: An extended framework. Journal of Consumer Research, 13: 119-126.
- Buckley, J., & Schneider, M. 2003. Shopping for Schools: How Do Marginal Consumers Gather Information About Schools? Policy Studies Journal, 31(2): 121-146.
- Bundesministerium für Bildung und Forschung (Ed.). 2002. Grund- und Strukturdaten 2001/2002. Bonn: Bundesministerium für Bildung und Forschung.
- Campbell, R., & Siegel, B. N. 1967. The demand for Higher Education in the United States, 1919-1964. American Economic Review, 57: 482-494.
- Catell, R. B. 1966. The Scree Test for the Number of Factors. Multivariate Behavioral Research, 1: 245-276.
- Cook, P. J., & Frank, R. H. 1993. The Growing Concentration of Top Students at Elite Schools. In: Clotfelter, C. T., & Rothschild, M. (Eds.) 1993. Studies of Supply and Demand in Higher Education. Chicago: University of Chicago Press.
- Dziuban, C. D., & Shirkey, E. C. 1974. When is a Correlation Matrix Appropriate for Factor Analysis? Psychological Bulletin, 81(6): 358-361.
- Fabel, O., Lehmann, E., & Warning, S. 2001. Der relative Vorteil deutscher wirtschaftswissenschaftlicher Fachbereiche im Wettbewerb um studentischen Zuspruch: Qualität des Studiengangs oder des Studienortes? Diskussionsbeiträge Universität Konstanz, 1(311). Konstanz: Universität Konstanz.
- Fuller, W. C., Manski, C. F., & Wise, D. A. 1982. New evidence on the economic determinants of postsecondary schooling choices. Journal of Human Resources, 17: 477-498.
- Gensch, S., Lullies, S. 1987. Die Attraktivität der Universität Passau – Gründe für ein Studium in Passau. Beiträge zur Hochschulforschung, 9(18).
- Gioia, D. A., & Corley, K.G. 2002. Being Good Versus Looking Good: Business School Rankings and the Circean Transformation From Substance to Image. Academy of Management Learning and Education, 1(1): 107-120.
- Guttman, L. 1953. Image Theory for the Structure of Quantitative Variates. Psychometrika,

18: 277-296.

- Hauser, R. M. 1993. Trends in College Entry among Whites, Blacks, and Hispanics. In: Clotfelter, C. T., & Rothschild, M. (Eds.) 1993. Studies of Supply and Demand in Higher Education. Chicago: University of Chicago Press.
- Heine, C. 2002. Studieren an der Universität Münster – Einschätzungen, Motive und Wünsche aus der Sicht der Studierenden. Kurzinformation HIS Nr. 1. Hannover: Hochschul-Informations-System.
- Heller, D. E. 1997. Student price response in higher education. Journal of Higher Education, 68: 624-659.
- James, R., Balwin, G., & McInnis, C. 1999. Which University? The Factors Influencing the Choice of Prospective Undergraduates. Canberra: Higher Education, DETYA.
- Jantzen, R. H. 2000. Price and Quality Effects on the demand for U.S. Graduate Business Programs. International Advances in Economics Research, 6(4): 730-740.
- Kaiser, H. F., & Rice, J. 1974. Little Jiffy, Mark IV. Educational and Psychological Measurement, 34: 111-117.
- Kane, T. J. 1999. The price of admission. Washington: Brookings.
- Kim, D., Markham, F. S., & Cangelosi, J. D. 2002. Why students pursue the Business Degree: A Comparison of Business Majors Across Universities. Journal of Education for Business, 5: 28-32.
- Knight, J. 2002. Trade in Higher Education Services: The Implications of GATS. London: Observatory of borderless higher education.
- Koshal, R. K., & Koshal, M. 1999. Demand and Supply of Educational Service: a case of liberal arts colleges. Education Economics, 7(29): 121-130.
- Kotler, P., & Fox, K. F. A. 1995. Strategic Marketing for Educational Institutions (2nd ed.), Englewood Cliffs: Prentice-Hall.
- Krapp, A. 2001. Veränderung der Motivation und Motive im Studium der Staats- und Sozialwissenschaften des Jahrgangs 1998. München: Universität München.
- Levin, H. M. 1995. School Choice: Market Mechanisms. In: Carnoy, M. (Ed.). International Encyclopaedia of Economics of Education (2nd ed.), Oxford: Pergamon.
- Lewin, K., Heublein, U., Schreiber, J., Spangenberg, H., & Sommer, D. 2001. Studienanfänger im Wintersemester 2000/2001. Hochschulplanung Band 155. Hannover: Hochschul-Informations-System.
- Lewin, K., Heublein, U., & Sommer, D. 2000. Differenzierung und Homogenität beim Hochschulzugang. HIS Kurzinformation Nr. 7, Hannover: Hochschul-Informations-System.
- Light, A., & Strayer, W. 2000. Determinants of college completion: school quality or student ability? The Journal of Human Resources, 35(2): 299-332.
- Mauldin, S., Crain, J. L., & Mounce, P. H. 2000. The accounting principles instructor's influence on students' decision to major in accounting. Journal of Education for Business, 75 (3): 142-148.
- Mazzarol, T., & Soutar, G. N. 2001. The global market for higher education: sustainable competitive strategies for the new millennium. Cheltenham, UK; Northampton, MA: Edward Elgar.
- McPherson, M. S., & Schapiro, M. O. 1999. The student aid game: Meeting need and reward-

- ing talent in American Higher Education. Princeton: Princeton University Press.
- Nelson, P. 1970. Information and Consumer Behavior. Journal of Political Economy, 78(2): 311-329.
- Nietiedt, T., & Meißner, H. 1995. Ansatz einer universitären Kommunikation mit potentiellen Studierenden. Beiträge zur Hochschulforschung, 17(1): 1-34.
- Rothschild, M., & White, L. J. 1993. The University in the Marketplace: Some Insights and some puzzles. In: Clotfelter, C. T., & Rothschild, M. (Eds.) 1993. Studies of Supply and Demand in Higher Education. Chicago: University of Chicago Press.
- Scott, S. V. 2000. The Academic as a Service Provider: is the customer always right? Journal of Higher Education Policy and Management, 21(2): 193-202.
- Schneider, M., Teske, R., Marschall, M., & Roch, C. 1998. Shopping for schools: In the land of the blind, the one-eyed parent may be enough. American Journal of Political Science, 42(3): 769-793.
- Schwaiger, M. 2001. Der Student als Kunde – eine empirische Analyse der Zufriedenheit Münchner BWL-Studenten mit ihrem Studium. Beiträge zur Hochschulforschung, 25(1): 32-62.
- Stiglitz, J. E. 1974. The demand for education in public and private school systems. Journal of Public Economics, 3: 349-385.
- Teske, P., Schneider, M., Mintrom, M., & Best, S. 1993. Establishing the micro foundations of a macro theory: Information, movers, and the competitive local market for public goods. American Political Science Review, 87: 702-713.
- Trogele, U. 1995. Strategisches Marketing für deutsche Universitäten: Die Anwendung von Marketing-Konzepten amerikanischer Hochschulen an deutschen Universitäten. Frankfurt: Peter Lang.
- Tybout, A., & Artz, N. 1994. Consumer psychology. Annual Review of Psychology, 45: 131-169.
- Winston, G. C. 1999. Subsidies, Hierarchies and Peers: The awkward economics of Higher Education. Journal of Economic Perspectives, 13(1): 13-36.
- Winston, G. C. 2003. Toward a theory of tuition: Prices, peer wages and competition in higher education. Discussion paper No. 65. Williamstown: Williams College.
- ZVS. 2004. Zentralstelle für die Vergabe von Studienplätzen. www.zvs.de.

**Forschungspapiere
der Wissenschaftlichen Hochschule für Unternehmensführung (WHU)
- Otto-Beisheim-Hochschule -**

Lfd. Nr.	Autor	Titel
1. (1991) – 60.(1998)		Diese Forschungspapiere sind nicht mehr einzeln aufgeführt. Sollten Sie daran interessiert sein, wenden Sie sich bitte an das Rektorat der WHU (Tel. 0261-6509151)
61.	Weber, Jürgen	Stand und Entwicklungsperspektiven des Logistik-Controlling (Januar 1999)
62.	Weber, Jürgen Schäffer, Utz	Entwicklung von Kennzahlensystemen (Februar 1999)
63.	Hommel, Ulrich Riemer-Hommel, Petra	Die ökonomische Bewertung von Arbeitsflexibilisierungsmaßnahmen mit Hilfe des Realloptionsansatzes (April 1999)
64.	Dufey, Günter	“Asian Financials Markets – A Pedagogic Note” (forthcoming in “Journal of Asian Business, Vol. 15, no.1, 1999) (Mai 1999)
65.	Weber, Jürgen Schäffer, Utz Hoffmann, Dirk Kehrmann, Titus	Technology Assessment zur Sicherstellung einer rationalen Technologiepolitik (Juni 1999)
66.	Weber, Jürgen Schäffer, Utz	Auf dem Weg zu einem aktiven Kennzahlenmanagement (Juni 1999)
66 (E).	Weber, Jürgen Schäffer, Utz	On the Way to Active Management of Performance Measures (June 1999, translated October 1999)
67.	Weber, Jürgen Schäffer, Utz Hoffmann, Dirk Kehrmann, Titus	Koordination technikreflektierender Forschung in Deutschland – eine Analyse (Juni 1999)
68.	Schäffer, Utz	Zeit des Managements – Kern einer Theorie der Unternehmenssteuerung? (August 1999)
69.	Weber, Jürgen Brettel, Malte	Management des Praxisbezugs der Lehre an der WHU Koblenz – Konzept und Erfahrungen (August 1999)

Lfd. Nr.	Autor	Titel
70.	Weber, Jürgen Schäffer, Utz Langenbach, Wilm	Gedanken zur Rationalitätskonzeption des Controlling (Oktober 1999)
71.	Weber, Jürgen Schäffer, Utz	Controlling als Koordinationsfunktion? – Zehn Jahre nach Küpper/Weber/Zünd (Oktober 1999)
72.	Weißberger, Barbara Stromann, Hilke	Die Bedeutung von Prozeßkosten für die Bewertung der Herstellungskosten nach §255 Abs. 2 HGB (Dezember 1999)
73.	Weber, Jürgen Brettel, Malte Jaugey, Cyril Rost, Cornelius	Business Angels in Deutschland – Wie Business Angels in Deutschland jungen Unternehmern helfen (Februar 2000)
73 (E).	Weber, Jürgen Brettel, Malte Jaugey, Cyril Rost, Cornelius	Business Angels in Germany – How Business Angels in Germany help new entrepreneurs (February 2000)
74.	Weber, Jürgen Schäffer, Utz Prenzler, Carsten	Charakterisierung und Entwicklung von Controlleraufgaben (Juli 2000)
75.	Schäffer, Utz	Kontrollieren Controller? – und wenn ja: Sollten sie es tun? (August 2000)
76.	Dufey, Günter	The Blurring Borders of Banking (August 2000)
77.	Weber, Jürgen	Neue Perspektiven des Controlling (September 2000)
78.	Weber, Jürgen Dehler, Markus	Erfolgswirkungen einer logistischen Führungskonzeption (April 2001)
79.	Weber, Jürgen Dehler, Markus	Der Einfluss der Logistik auf den Unternehmenserfolg (April 2001)
80.	Trautwein, Andreas Vorstius, Sven	Internet Hype and the Quest for Value-Relevance - An empirical investigation of value-drivers on the Neuer Markt - (Juni 2001)
81.	Brettel, Malte Thust, Solveig Witt, Peter	Die Beziehung zwischen VC-Gesellschaften und Start-Up-Unternehmen (September 2001)
82.	Brettel, Malte	Entscheidungskriterien von Venture Capitalists (September 2001)

Lfd. Nr.	Autor	Titel
83.	Witt, Peter Brachtendorf, German	Gründungsfinanzierung durch Großunternehmen
84.	Brettel, Malte	Deutsche Business Angels im internationalen Vergleich <i>Empirische Erkenntnisse</i> (November 2001)
85.	Witt, Peter Zillmer, Peter	Renditorientierte Business Inkubatoren in Deutschland – eine empirische Analyse von Marktveränderungen
86. (E)	Ernst, Holger Soll, Jan Henrik	An integrated portfolio approach to support market-oriented R&D planning
87.	van der Velden, Claus Zillmer, Peter	Corporate Raider – Möglichkeiten und Grenzen im deut- schen Governance System
88.	Merten, Barnert	Lessons from structural adjustment in Bolivia
89.	Brettel, Malte Endres, John Plag, Martin Weber, Jürgen	Grundgedanken zu einer Theorie des Veränderungsma- nagements
90.	Redlefsen, Matthias	Der Ausstieg von Gesellschaftern aus großen Familienun- ternehmen – ein Leitfaden für Unternehmen
91.	Hutzschenreuter, Tho- mas	E-Learning and Mass Customization (August 2002)
92.	Hutzschenreuter, Tho- mas	Using E-Learning Technologies and E-Learning Pro- grams to Support Knowledge Management in Multina- tional Companies (September 2002)
93.	Bartl, Michael Füller, Johann Ernst, Holger Mühlbacher, Hans	Managerial Perspectives on Virtual Customer Integration
94.	Ernst, Holger Thomas Lechler	The Emergence of Executive Champions and their Impact on Innovation Performance
95.	Ernst, Holger Nils Omland	Patent Management in High Technology Companies – a first look
96.	Ernst, Holger	Causes and Effects of a Single Informant Bias in Empiri- cal Innovation Research
97	Reserviert für Herrn Miczaika	
98	Ernst, Holger Spann, Martin Skiera, Bernd Soll, Jan Henrik	Using Experimental Stock Markets to Identify Innovative Users
99	Res. für Herrn Lichten- tahler	

Lfd. Nr.	Autor	Titel
100	Hutzschenreuter, Thomas	Unternehmensentwicklung - Stand der Forschung und Entwicklungstendenzen
101	Hutzschenreuter, Thomas Mück, Christiane Heidrich Stefan Radloff, Anika	Looking for the Academic Fast Track: An Empirical Investigation of Business School Choice by Highpotential German Students.

Rektorat / September 2004