

The Austrian Library Planning Model

Information use: USA versus Austria

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Abstract

The Library Planning Model (LPM) is a tool which is being used in a larger project, funded by the Austrian National Bank, which deals with library-like information management functions in Austrian industries.

LPM is a means to estimate the staffing required to handle workloads, like those involved in serving library users and processing acquisitions. However, the LPM has been developed in an Anglo-American context and needed to be adapted to Austrian circumstances. The Austrian average university library, based on average workloads of Austrian university libraries, was the starting point making those changes. Three factors were used for calibration: number of loans, number of staff, and number of library visits. One major adaptation concerned the number of active undergraduate library users, as the ratio of graduates to undergraduates in Austria is different from the ratio in the United States. Other adaptations were made in the reader services area, and a few adaptations in the technical services area.

Keywords: Library Planning Model, United States, Austria, adaptations, university libraries

1 General introduction

This paper focuses on information management functions in libraries, which are the starting point of a larger project¹. It follows a methodology developed by Robert M. Hayes (2001), who has already conducted similar research in the United States and Croatia.

This paper will present the first part of the indicated project, which deals with measurement of information management functions in Austrian university libraries. As the Hayes methodology has been developed for the Anglo-American library environment, several changes need to be made to adapt the main tool, the Library Planning Model (LPM), for Austrian university libraries. The analyses presented in this paper are pursuing this goal.

¹ "Information management functions in national economies: an analysis of the information sector in Austria" funded by the Jubiläumsfonds of the Austrian National Bank; see project details at http://www.uni-graz.at/iwiwww/f_imf.html

1.1 About the project

The above mentioned project deals with library-like information management functions, i.e. all functions and processes related to information selection, information acquisition, information description, information preservation and the creation of information products and information services. The fundamental assumption is that these functions not only occur in libraries and information centers but also in economic contexts and particularly in industries with high information needs. The information management functions will serve as a starting point when analyzing these industries.

1.2 Objectives of this paper

The primary goal of this paper is to adapt the "American"² version of the Library Planning Model (LPM) and to get, as a result, the so called "Austrian average university library" based on LPM calculations. This university library does not correspond to any real Austrian university library.

It is important for us to point out that it is not the goal of this paper to provide any kind of ranking of American and Austrian libraries. Whereas it is the goal to show, where differences concerning university libraries occur, what the reasons for these differences could be, and which changes we had to make in order to get to the LPM Austrian average university library.

2 Data sources

Section two describes the relevant data sources necessary for our analyses. Basically, two different sources are used, university and library data.

To give a basic idea, about the large differences between the United States and Austria we are dealing with in this paper, we would like to present a few absolute numbers.

Table 1: Population and university data

	Austria	United States
Population	8.2 mil. ³	301.1 mil. ³
Public universities	21	236 ⁴
Students	ca. 200,000	ca. 4,000,000 ⁵

² The original version of the LPM is the Anglo-American version. In this paper the original version is called "American" version, to distinguish it from the adapted Austrian version.

³ Source: <https://www.cia.gov/library/publications/the-world-factbook/>

⁴ Number of research and PhD awarding institutions according to Carnegie categories 11, 12, 13, 14

⁵ Number of students at research and PhD awarding institutions according to Carnegie categories 11,12,13,14

According to these numbers, the United States have 37 times the population of Austria, ten times the number of public universities and twenty times the number of students of Austria.

2.1 Austria: university data

In Austria the number of universities has been steadily increasing in the past ten years. There are currently 21 universities in Austria, which offer diploma, bachelor, master, and doctoral studies. There is only one university, the Donau University Krems, which has specialized in postgraduate continuing education. According to its focus it does not offer any undergraduate programs and therefore is not included in the list of universities in this paper.

The 21 universities are:

1. University of Vienna
2. University of Graz
3. University of Innsbruck
4. University of Salzburg
5. Vienna University of Technology
6. Graz University of Technology
7. University of Mining Leoben
8. University of Natural Resources and Applied Life Sciences, Vienna
9. University of Veterinary Medicine Vienna
10. Vienna University of Economics and Business Administration
11. University of Linz
12. University of Klagenfurt
13. University of Applied Arts Vienna
14. University of Music and Performing Arts Vienna
15. University of Music and Dramatic Arts "Mozarteum" Salzburg
16. University of Music and Dramatic Arts Graz
17. University of Art and Industrial Design Linz
18. Academy of Fine Arts Vienna.
19. Vienna University of Medicine
20. Graz University of Medicine
21. Innsbruck University of Medicine

In the recent years, these universities had to cope with two major changes. One important change was the Austrian Universities Act 2002⁶, which gave financial autonomy to Austrian universities and which was the legal basis for three autonomous medical universities. The second major change was initiated by the Bologna process. According to it Austrian universities had to adapt their study programs to international standards. Austrian universities are currently in the phase of transition from old diploma studies to new bachelor and master studies.

The data for the number of students, faculty and general staff⁷ are provided by the data warehouse published by the federal ministry for science and research (see tables in Appendix).

2.2 Austria: library data

In Austria there is only one major source for library statistics. Statistics Austria⁸ is a non-profit federal institution under public law, which provides data for all university libraries.

Since 1997 Statistics Austria has been conducting annual library surveys. The current questionnaire comprises 33 questions about type of library, holdings, journals, acquisitions, users, loans, online usage, staffing and expenditures.

There are other statistical initiatives, like the German "Bibliotheksindex"⁹, where Austrian libraries participate, but this is primarily a performance measurement tool, which offers valuable additional information. As none of the statistical initiatives offers such complete data as Statistics Austria, these sources are not taken into consideration in this paper.

As already indicated above, Austria has 21 universities, but only 20 university libraries. As a matter of fact, Innsbruck medical university has not its own separate library but shares it with the University of Innsbruck.

Beyond that, one library did not provide data to Statistics Austria, so only 19 university libraries will be taken into consideration in our analyses.

2.3 United States: university and library data

While we are talking about 21 universities in Austria, 20 university libraries and about 200.000 students, the magnitudes in the United States (236 universities and about 4 mil. students¹⁰) are ten to twenty times the Austrian numbers

⁶ Universities Act 2002, January 2008, Federal Ministry for Science and Research http://www.bmwf.gv.at/fileadmin/user_upload/wissenschaft/recht/englisch/E_UG.pdf

⁷ UNIVERSITIES ACT 2002, Part III, University Members, Chapter 1, Classification; § 94. The non-academic university staff comprises the administrative staff, the technical staff, the library staff, the nursing staff, physicians exclusively engaged in public hospital duties and physicians in specialists' training.

⁸ http://www.statistik.at/web_en/

⁹ Bibliotheksindex <http://www.bix-bibliotheksindex.de/>

¹⁰ Research and PhD awarding institutions according to Carnegie categories 11, 12, 13, 14

Statistical data about American universities and university libraries have been taken from the National Center for Education Statistics (NCES)¹¹. University data are provided on an annual basis, reports for academic libraries are published biennially, classified by the Carnegie Classification Code¹². This classification includes all colleges and universities in the United States that are degree-granting and accredited by an agency which is recognized by the U.S. Secretary of Education.

3 Methodology

This section presents an overview on the methodology, which was used in the analyses. It is based on the Library Planning Model, which relates workloads to staffing requirements.

The Library Planning Model (LPM) is a tool for estimating staffing requirements to meet identified workloads on library functions such as information services (circulation, reference), information acquisition (collection development), information description (cataloging), information preservation (conservation), etc.

LPM is an Excel spreadsheet model, which is based on six matrices, three relating to clients and services for clients and three to materials and technical processes for materials. In each case, the first matrix contains data necessary for determining workloads involved, the second contains data for determining the extent to which workloads use specific services or processes; and the third contains workload factors as means for estimating required staff.

In the model, the workloads are considered in two major categories: those related to services of the populations served (reader services) and those related to internal processing of the materials acquired (technical services).

Input data

The data to be entered into the LPM include number of users, holdings and number of acquired materials.

User data:

- number of general staff (FTE)
- number of employed faculty staff (FTE)
- number of fully enrolled graduates and undergraduates
- number of interlibrary loan institutions

Holdings (materials data):

- total number of books

Acquisition (materials data):

- number of new acquired books

¹¹ <http://nces.ed.gov/>

¹² The Carnegie Classification of Institutions of Higher Education is the main categorization code of American colleges and universities; <http://www.carnegiefoundation.org/Classification/downloads.htm>

- number of serials subscriptions acquired annually

Table 2: Data entry table for library users in LPM

USAGE BY	TOTAL	USER %	USES/	TOTAL
POPULATION TYPES	POPULATION		USER	USES
Staff	600	25%	50	7500
Faculty	974	100%	90	87660
Graduate Students	2586	100%	60	155160
Under-Graduate Students	19289	100%	45	868005
Institutions (ILL Lending)	5920	100%	1	5920
Researchers		100%	25	
Informed Public		100%	25	
General Public		1%	9	
Total Uses				1124245

Output data

LPM applies workload factors to the input data entered. These workload factors are the estimated times for library staff to perform a transaction for each library function. As a result, LPM provides estimates for the staff required for each library function for: reader services staff and technical services staff. Additionally, LPM provides two more categories, "Supervise/Manage" and "G&A". While "Supervise/Manage" relates to tasks such as supervision, assignment and scheduling, assessment and evaluation, "G&A" (general management and central administration) relates to tasks dealing with accounting, personnel and systems and includes also the library director.

Table 3: Actual staff distributions¹³ according to LPM

ACTUAL STAFF DISTRIBUTIONS					
FUNCTION	READER SERVICES	TECH SERVICES	SUPERVISE/MANAGE	G & A	TOTAL
Manage Library				12,00	12,00
Reference	18,00		3,00		21,00
Circulation	30,00		6,00		36,00
Collection Development		23,00	5,00		28,00
Catalog		15,00	3,00		18,00
Conserve					
Publish		5,00	1,00	1,00	7,00
TOTAL	48,00	43,00	18,00	13,00	122,00
RESULTS FROM MODEL	52,46	34,55	16,53	15,53	119,08

Actual staff distribution for one/more university /ies.

Output data, estimation of staff calculated by LPM

¹³ The table "ACTUAL STAFF DISTRIBUTION" shows the comparison of the actual data (blue numbers plus the sum per staff category "TOTAL") with the "RESULTS FROM MODEL", which are provided by the LPM.

The Library Planning Model is used to provide the staff numbers for the Austrian average university library in the reader services and technical services category, which are the basis for further analyses of information management functions in economy.

4 LPM adaptations

As already mentioned before, the LPM was developed for Anglo-American academic libraries. Using it in an Austrian context means that it has to be adapted to the local situation. In the following sections we will describe the steps of adaptation in more detail.

In a first step we calculated the average values for circulation, FTE and visits, which are given in the library statistics. We call this set of average values "Austrian average university library". As a consequence of this calculation, the differences between the data of the Austrian average university library and the data of a single Austrian university library may be indeed quite big. In spite of the small number of university libraries in Austria, they show a high diversity in the data.

The second step is then done in LPM. Entering the input data (users, holdings and acquisitions) into LPM, the tool provides estimates for circulation, FTE and visits, which can then be compared to the values for the Austrian average university library. As a matter of fact the results were quite different and therefore modifications to LPM are necessary.

4.1 Number of loans (circulation)

The first value we dealt with in the phase of adaptations in LPM was circulation. After entering the workload factors into the American version of the LPM, the number of loans estimated by the LPM was much too large in comparison with the statistical data for the average Austria academic library. As a matter of fact, the number of loans depends on the type of user. Graduates are considered to be much heavier users than undergraduates. In the United States about 33% of the students are considered to be graduate students. Because of the phase of transition from diploma to bachelor and master studies, the number of graduates in Austria is still relatively small. In 2005 the share of graduates was about 8-10%. This percentage shows that the ratio of graduate to undergraduate students is significantly different in Austria. Considering the fact that diploma students are comparable to master students concerning library use but are counted as undergraduates, we had to increase the percentage of active undergraduate library users to 24%. These are the results for circulation, based on our changes and compared with the actual circulation data from library statistics.

Table 4: Comparison of circulations according to Statistics Austria and LPM

LIBRARY	CIRCULATION LPM	ACTUAL CIRCULATION STATISTICS AUSTRIA	Circulation LPM/ Actual Circulation
University of Mining Leoben	27,386	14,788	1.85
Vienna University of Technology	206,068	114,323	1.80
Vienna University of Medicine	172,705	97,221	1.78
Graz University of Technology	114,080	64,912	1.76
Academy of Fine Arts Vienna	14,213	8,454	1.68
University of Linz	152,071	97,020	1.57
University of Music and Performing Arts Vienna	42,386	28,576	1.48

University of Natural Resources and Applied Life Sciences, Vienna	76,073	56,911	1.34
Vienna University of Economics and Business Administration	252,493	207,081	1.22
University of Graz	259,309	250,787	1.03
University of Music and Dramatic Arts Graz	22,212	23,477	0.95
University of Vienna	825,156	988,873	0.83
University of Veterinary Medicine Vienna	28,083	34,355	0.82
University of Innsbruck	295,978	375,444	0.79
University of Applied Arts Vienna	21,057	28,563	0.74
University of Art and Industrial Design Linz	12,570	17,329	0.73
University of Klagenfurt	61,274	99,612	0.62
University of Music and Dramatic Arts "Mozarteum" Salzburg	22,367	37,000	0.60
University of Salzburg	136,959	266,246	0.51
AUSTRIAN AVERAGE UNIVERSITY LIBRARY	144,339	147,946	0.98

In this analysis all nineteen libraries were taken into consideration, only two are very close to the LPM estimates. Even if the range of circulation data in Austrian university libraries in relation to LPM estimates is very wide, the results for the average university library show a very close match.

4.2 Staffing

Technical services staff

Comparing organization charts of different libraries with the LPM estimates for staffing, we found out that the results for technical services staff were quite close. Still, two factors did not correspond completely. In the American version of the LPM the ratio of originated orders to standing orders was 50%:50%. As a matter of fact, in Austria university libraries are usually (according to different discussions) ordering their books themselves. Standing orders seem to be quite rare, or not existing. Therefore, we changed the factor to 100% originated orders. That means that all media are selected by the librarians themselves.

A second change was made in the context of collection development. The total time needed for the selection process of one book was reduced from 100 minutes to 30 minutes.

Reader services

In spite of the adaptations for circulations and technical services staff, the LPM estimates for the FTE were still too high. This fact leads us to the conclusion that we had to reduce the number of reader services staff. In order to calibrate the LPM results, we reduced in LPM the duration for "extended references service" and "database access". The extended reference service has been changed from 50 (US) to 20 (A) minutes and the database access services from 50 (US) to 40 (A) minutes.

Table 5: Comparison of FTE according to Statistics Austria and LPM

LIBRARY	FTE LPM	ACTUAL FTE Statistics Austria	FTE LPM/ ACTUAL FTE
Vienna University of Medicine	58.4	26.1	2.24

Vienna University of Economics and Business Administration	76.4	45	1.70
University of Linz	63.1	45	1.40
Vienna University of Technology	68.4	52	1.32
University of Music and Performing Arts Vienna	15.6	12	1.30
University of Natural Resources and Applied Life Sciences, Vienna	28.7	24	1.19
University of Vienna	311.8	266.6	1.17
Graz University of Technology	41.8	37.5	1.11
University of Applied Arts Vienna	9.6	9	1.07
University of Music and Dramatic Arts Graz	11.1	11	1.01
University of Innsbruck	122.8	128.6	0.95
University of Veterinary Medicine Vienna	12.1	14	0.87
University of Graz	100.2	116	0.86
University of Music and Dramatic Arts "Mozarteum" Salzburg	9.7	12	0.81
University of Klagenfurt	32.0	40	0.80
University of Art and Industrial Design Linz	4.79	6	0.80
University of Salzburg	73.6	96	0.77
University of Mining Leoben	9.1	13.8	0.66
Academy of Fine Arts Vienna	6.2	10.5	0.59
AUSTRIAN AVERAGE UNIVERSITY LIBRARY	55.5	50.8	1.09

With the adaptations of the LPM for technical and reader services staff, the LPM average number of FTE is within a 10% range of the Austrian average university library.

4.3 Number of visits

In a centralized library environment with turnstile counts library visits are a good point of calibration for data. That is not the case in Austria. Austria has a small number of central and faculty libraries, but an enormous number of departmental and interdepartmental libraries. Not all of these decentralized libraries have turnstile counts and sometimes do not even offer circulation. The number of visits indicated in the library statistics is therefore not very reliable. According to the changes we have made before, the LPM proposal for visits looks as follows:

Table 6: Ranking of Austrian university libraries according to library visits

LIBRARY	VISITS LPM	ACTUAL VISITS STATISTICS AUSTRIA	Visits LPM/ Actual visits
Academy of Fine Arts Vienna	53,208	15,500	3.43
Graz University of Technology	431,624	132,491*	3.26
University of Linz	588,917	246,810*	2.39
University of Mining Leoben	102,465	44,090	2.32
University of Veterinary Medicine Vienna	131,078	64,820	2.02
Vienna University of Technology	785,780	389,003	2.02
University of Innsbruck	1,123,169	758,887	1.48
Vienna University of Medicine	606,539	432,222	1.40

University of Natural Resources and Applied Life Sciences, Vienna	290,150	209,501	1.38
University of Vienna	3,191,161	2,412,701	1.32
University of Klagenfurt	230,403	189,716	1.21
University of Music and Dramatic Arts Graz	81,268	73,520	1.11
Vienna University of Economics and Business Administration	984,934	902,685	1.09
University of Salzburg	517,457	481,671	1.07
University of Applied Arts Vienna	78,532	86,472	0.91
AUSTRIAN AVERAGE UNIVERSITY LIBRARY	613,112	429,339	1.43

* Number of visits counted only in main library

According to the results of this table, the difference between the LPM estimate and the average value of library statistics for library visits is relatively big. The LPM estimates are nearly 50% higher than the average value from library statistics. Considering the fact that two libraries indicated that their statistical data include only the visits of the main library, the actual number of visits in Austrian university libraries is probably a bit higher than the results presented here. This assumption leads us to the conclusion that the number of visits in American university libraries is higher than in Austrian university libraries, but the difference is probably not as high as indicated in the table above.

5 Data uncertainties

During our analyses we discovered several data uncertainties, which we would like briefly to discuss in this section.

Statistics Austria conducts a nationwide annual library survey. As the participation at that survey is not obligatory, not all university libraries provided data and even those which provided data did not or could not answer all questions and did therefore not provide a complete set of data.

5.1 Faculty staff and student data

The data concerning faculty staff and students seem to be reliable. They are derived from the data warehouse of the federal ministry for science and research. Nevertheless, there are some uncertainties, which we would like to point out.

Faculty staff

Faculty staff means only fully employed scientific and artistic university staff, including university professors, university lecturers and other research, artistic and teaching staff. External lecturers who are employed part-time or only for the period of time teaching are not included.

Students

In Austria students can be enrolled at different universities and in different programs at the same university and at the same time. Therefore, the total number of students is in fact smaller, than the sum of students per university or program.

Another issue is the ratio between undergraduates and graduates. Austria currently is in the phase of transition from former "diploma studies" to the new system of "bachelor" and "master studies". While the "old" diploma studies are discontinued, not all universities have introduced the new three cycle system (bachelor/master/doctorate) yet. In 2005, 17 universities

(out of 21) offered bachelor programs, and 16 universities (out of 21) master programs. In that particular year the share of graduates amounted to about 8%, counting the diploma and bachelor students as undergraduates and the master and the doctoral students as graduates. However, to count diploma students as undergraduates is not totally correct. Diploma students, during the phase of writing the thesis, use the library as intensively as master students.

5.2 Library structure

As already mentioned before, Austrian university libraries have a very fragmented structure. Only five university libraries (25%) out of 20 consist of a single central library without any sub-libraries. The other 15 university libraries (75%) have either faculty, departmental or interdepartmental libraries. According to their web pages we identified 11 faculty libraries and some hundred departmental or interdepartmental libraries, which are in many cases staffed by the university and not by the library.

6 Summary

The LPM needed to be adapted to the Austrian situation, based on input data such as users, holdings and acquisitions from different data sources and on output data such as circulation, staffing and library visits.

AUSTRIAN AVERAGE UNIVERSITY LIBRARY	LPM	STATISTICS AUSTRIA	LPM/STAT. A.
CIRCULATION	144,339	147,946	0.98
FTE	55.5	50.8	1.09
VISITS	613,112	429,339	1.43

According to library statistics, the Austrian average university library has 147,946 loans per year. The LPM version estimated 144,339 loans per year. The big difference between the Austrian and the American LPM results is due to the different distribution of students. In order to reach this close match we had to adapt the percentage of active undergraduate library users.

It will be interesting to see how the situation will develop with the increasing number of graduate students in the next years.

The results for staffing provided by the LPM were originally much higher than the numbers given by Austrian library statistics. As the changes for technical services had only small effects on staffing, we concluded that the number of people working in the reader services needed to be changed. According to library statistics, the Austrian average university library has 50.8 FTE. The calibration of the reader services area in LPM resulted in 55.5 FTE.

The fact that the staffing of the reader services area needed more modifications than the technical services area could lead to the conclusion that Austrian university libraries are more focused on media acquisition than on reader services. It could also mean that this area is not as well staffed as in the United States. It is difficult to say if there is a direct relation between the staffing of the reader services area and the number of library visits, which are significantly higher in the United States.

The number of visits according to LPM is nearly 50% higher than the actual visits. Since not all actual library visits in Austrian university libraries are included in these numbers, comparisons are a bit lame. We assume that the number of library visits in Austria is probably a bit higher than indicated here, but it will probably not amount to the number as estimated by LPM. These assumptions allow us the conclusion that the number of visits in the United States is probably higher than in Austria. One reason for lower usage numbers could be the fact that in Austrian university libraries a substantial part of the holdings is in closed stacks. We did not try to make any further calibration as the data available was not reliable enough.

7 Outlook

Electronic resources have not been taken into account in the LPM so far. At the moment we are conducting a survey to determine the workload for electronic resources. One of the basic assumptions of this survey is that the workload factors for electronic resources do not depend directly on their numbers.

Since electronic resources are usually negotiated as part of a "package", it is expected that the number of contracts is a better basis for the calculation of workloads. The first results of the survey will be available this July.

In order to move on with our project we will use the results for FTE provided by LPM for reader services and technical services staff. With these data we are able to make a further step in order to reach the goal of our project.

The FTE in technical services will be related to the total expenditure for media, the FTE in reader services will be divided by the number of primary library users. Both ratios are the basis for the calculation of FTE in both categories in industries.

8 Bibliography

Hayes, R. M. (2001). *Models for Library Management, Decision-Making, and Planning*. San Diego, Calif.: Academic Press.

Appendix

Table A1: Fully enrolled students at Austrian universities
 (Source: Data warehouse of the federal ministry for science and research,
 Winter Semester 2005/06 (28.02.2006);
http://eportal.bmbwk.gv.at/portal/page?_pageid=93,140222&_dad=portal&_schema=PORTAL)

University	Total number of students
University Vienna	64.125
University Graz	19.853
University Innsbruck	19.793
Vienna University of Medicine	10.024
Graz University of Medicine	5.380
Innsbruck University of Medicine	3.523
University Salzburg	10.838
Vienna University of Technology	16.536
Graz University of Technology	8.777
University of Mining Leoben	2.009
University of Natural Resources and Applied Life Sciences, Vienna	5.438
University of Veterinary Medicine Vienna	2.228
Vienna University of Economics and Business Administration	20.127
University of Linz	11.686
University of Klagenfurt	6.316
University of Applied Arts Vienna	1.348
University of Music and Performing Arts Vienna	2.394
University of Music and Dramatic Arts "Mozarteum" Salzburg	1.296
University of Music and Dramatic Arts Graz	1.264
University of Art and Industrial Design Linz	878
Academy of Fine Arts Vienna	935
Total (adjusted)	203.453

Table A2: University personnel at Austrian universities (2005)
 (Source: Data warehouse of the Federal ministry for science and research;

http://eportal.bmbwk.gv.at/portal/page?_pageid=93,140222&_dad=portal&_schema=PORTAL)

University	Faculty staff	General staff	Total staff
University Vienna	1.733,6	1.532,6	3.266,2
University Graz	639,7	731,5	1.371,2
University Innsbruck	775,9	797,9	1.573,8
Vienna University of Medicine	1.459,7	1.965,6	3.425,3
Graz University of Medicine	536,4	509,4	1.045,9
Innsbruck University of Medicine	591,7	451,9	1.043,6
University Salzburg	538,6	484,8	1.023,4
Vienna University of Technology	879,1	812,7	1.691,8
Graz University of Technology	612,7	587,4	1.200,1
University of Mining Leoben	165,6	213,2	378,8
University of Natural Resources and Applied Life Sciences, Vienna	346,3	423,5	769,8
University of Veterinary Medicine Vienna	235,4	428,0	663,4
Vienna University of Economics and Business Administration	434,4	408,1	842,5
University of Linz	802,6	513,2	1.315,7
University of Klagenfurt	268,4	276,9	545,3
University of Applied Arts Vienna	156,8	112,4	269,2
University of Music and Performing Arts Vienna	445,3	258,4	703,7
University of Music and Dramatic Arts "Mozarteum" Salzburg	220,4	113,4	333,8
University of Music and Dramatic Arts Graz	232,9	121,6	354,4
University of Art and Industrial Design Linz	66,6	74,0	140,6
Academy of Fine Arts Vienna.	87,3	123,0	210,3
Total	11.229,4	10.939,4	22.168,7