



Comparative Analysis of Financial Management Practices
Current Financial Management in HEIs in EUROPE and SNA
Austria, Germany, Italy, Spain, Jordan, Lebanon, Palestine and Syria

WP 1 – deliverable 1.1 (activities 1.1.1, 1.1.2, 1.1.3)

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Executive Summary

Under the general objective of lending specific support to institutional demands for increased efficiency, autonomy and transparency in Financial Management (FM) in partnering Southern Neighboring Area (SNA) HEIs, one of the first work package's activities was a benchmarking analysis in order to examine financial management practices at the universities of the consortium countries and to promote FM self-critique outside the consortium.

The present study contemplates data gathered from four European countries (Austria, Germany, Italy and Spain) and four from the Southern Neighboring Area (Jordan, Lebanon, Palestine and Syria). In total 35 HEIs participated in the study, sharing their internal data with regards to financial and institutional management of their universities.

The study was undertaken from June to October 2011. The macro and micro data were provided via partner institutions within UNAM consortium. For data normalization, all values for macro and micro analysis were converted into EUR, using *oanda rate* (November 30th, 2011). In the macro data, some ratios were calculated in order to have more comprehensive analysis, such as *Density* (Inhabitants/Nr. of HEI Institutions), *Share of public universities* and *Share of students* in public universities. The names of HEIs participating in micro analysis are treated anonymously.

The development of this deliverable was crucial for the project however not so easy to undertake. Delays due to political instability and lack of some data were among others, some of the issues that influenced the ongoing process and deadlines' matching, as well as the results. Therefore, in some analysis this study could not go deeper or so much into detail.

Nevertheless the results found here present an overview of the micro situation in HEIs in both regions – EU and SNA. The document presents how public and private universities from both regions are managing their finances and institutions.

It will be possible to see, for instance, despite of differences in education systems, which region is focusing more in research, types and ratio of funding sources, cooperation between university and industry and controlling and IT systems presented in EU and SNA countries.

In the end of this document, come comparison in macro and micro level will be made, as well as the conclusions of the present study and recommendations for HEIs in Europe and SNA for improving financial and institutional management towards better quality in teaching, researching and industry cooperation.

1. Macro Analysis

1.1. EU countries - Macro Data

1.1.1. Austria

1.1.1.1. General Description

With a geographical area of 83.879 km² the Federal Republic of Austria, is located in Central Europe, in the north of Italy and Slovenia and in the south of Germany. Austria comprises nine provinces and its capital is Vienna.

1.1.1.2. Macro Data

AUSTRIA	2010/2011
Population	8.401.000 ¹
GDP per Capita in \$ PPP	\$ 40.400
Overall Percentage of Population holding an Academic Degree	25%
Total Spending on Higher Education in % of GDP	5,7%
Total Number of Higher Education Institutions	70
Inhabitants/Nr. of HEI Institutions	152.745
Number of Public Universities	57
Number of Private Universities	13
Share of Public Universities:	81,4%
Total Number of Students	332.624 ²
Total Number of Students - Public Universities (if available)	273.542 ²
- Fachhochschulen	36.914 ²
- Pädagogische Hochschulen	15.691 ²
- Theologische Lehranstalten	192 ²
Total Number of Students - Private Universities (if available)	5.829 ²
Share of Students in Public Universities	82,2%
Total Number of Employees at HEIs	34.974 ² (teaching staff in all kind of HEIs)
Average Annual Tuition Fees - Public Universities	€ 726,72 (Austrians and EU students are generally free of charge for first study career; other students pay a fee of 363,36 EUR/semester + 16,- EUR to the Student Union). ³
Average Annual Tuition Fees - All Universities (If available)	-
Unemployment Rate of Graduates	1,7%
Overall unemployment rate	4,3% ¹
Average study time to complete bachelor level or equivalent	6-8 semesters
Average study time to complete master level or equivalent	2-4 semesters
Average Expenditure per Student per year	€ 11.258 ⁴
Average Percentage of Spending on Administration in HEI	-
Average Percentage of Spending on Research in HEI	-
Average Percentage of Spending on Teaching in HEI	-

1.1.2. Germany

¹ Wirtschaftskammern Österreichs (2011). WKO Statistical Yearbook 2011.

² Statistik Austria (2010). Bildung in Zahlen 2009/10 – Schlüsselindikatoren und Analysen.

³ <http://www.studyineurope.eu/study-in-austria/admission/tuition-fees>

⁴ OECD (2011). Education at a glance. p. 211.

1.1.2.1. General Description

Located in Central Europe, bordering the Baltic Sea and the North Sea, between the Netherlands and Poland and south of Denmark, Germany is Europe's largest economy and second most populous nation (after Russia). The Federal Republic of Germany – of which the capital is Berlin - has an area of 357.022 km² and comprises 16 states.

1.1.2.2. Macro Data

GERMANY	2010/11
Population	81.772.000
GDP per Capita in \$ PPP	\$ 35.700
Overall Percentage of Population holding an Academic Degree	11,36%
Total Spending on Higher Education in % of GDP	1%
Total Number of Higher Education Institutions	418 ⁵
Inhabitants/Nr. of HEI Institutions	195.627
Number of Public Universities	279
Number of Private Universities	139
Share of Public Universities	67%
Total Number of Students	2.214.112 ⁶
Total Number of Students - Public Universities (if available)	2.116.012 ⁶
Total Number of Students - Private Universities (if available)	98.000 ⁶
Share of Students in Public Universities	96%
Total Number of Employees at HEIs	564.696 [2009]
Average Annual Tuition Fees - Public Universities	€ 547
Average Annual Tuition Fees - All Universities (If available)	€ 605
Unemployment Rate of Graduates	2,5%
Overall unemployment rate	7,4%
Average study time to complete bachelor level or equivalent	6,5 Semester
Average study time to complete master level or equivalent	4,2 bzw. 10,4 (inkl. Bachelor) Semester
Average Expenditure per Student per year	€12.600,00 ⁶
Average Percentage of Spending on Administration in HEI	-
Average Percentage of Spending on Research in HEI	-
Average Percentage of Spending on Teaching in HEI	-

1.1.3. Italy

1.1.3.1. General Description

⁵ Winter semester 2010/11

⁶ ISCED 5a/6; 2007

With a total area of 301.340 km², the Italian Republic is located in Southern Europe, a peninsula extending into the central Mediterranean Sea at the northeast of Tunisia. The capital is Rome and the national territory is divided in 15 regions and 5 autonomous regions.

1.1.3.2. Macro Data

ITALY	2010/11
Population	60.340.328
GDP per Capita in \$ PPP	\$ 30.500
Overall Percentage of Population holding an Academic Degree	14%
Total Spending on Higher Education in % of GDP	0,90%
Total Number of Higher Education Institutions	95
Inhabitants/Nr. of HEI Institutions	677.267
Number of Public Universities	67
Number of Private Universities	28
Share of Public Universities	71%
Total Number of Students	1.734.340
Total Number of Students - Public Universities (if available)	1.622.340
Total Number of Students - Private Universities (if available)	112.000
Share of Students in Public Universities	94%
Total Number of Employees at HEIs	122.454
Average Annual Tuition Fees - Public Universities	€ 871
Average Annual Tuition Fees - All Universities (If available)	€ 4.069,46
Unemployment Rate of Graduates	4,8%
Overall unemployment rate	8,5%
Average study time to complete bachelor level or equivalent	4,6 years
Average study time to complete master level or equivalent	2,8 years
Average Expenditure per Student per year	€ 8.725
Average Percentage of Spending on Administration in HEI	13,2%
Average Percentage of Spending on Research in HEI	30,3%
Average Percentage of Spending on Teaching in HEI	31,4%

1.1.4. Spain

1.1.4.1. General Description

The Kingdom of Spain has a total area of 301,340 km², located in Southwestern Europe, bordering the Mediterranean Sea, North Atlantic Ocean, Bay of Biscay, and Pyrenees Mountains; at the southwest has France as neighbor. The capital is Madrid and the national territory comprises the so called 17 autonomous communities and 2 autonomous cities.

1.1.4.2. Macro Data

SPAIN	2010/11
Population	47.021.031 ⁷ (2010)
GDP per Capita in \$ PPP	\$ 29.400
Overall Percentage of Population holding an Academic Degree	21% ⁸ (25-65 years)
Total Spending on Higher Education in % of GDP	-
Total Number of Higher Education Institutions	76 ⁹
Inhabitants/Nr. of HEI Institutions	618.698
Number of Public Universities	50 ¹⁰
Number of Private Universities	26 ¹⁰
Share of Public Universities	66%
Total Number of Students	1.412.472 (2009/10)
Total Number of Students - Public Universities (if available)	1.249.883 (2009/10)
Total Number of Students - Private Universities (if available)	162.589(2009/10)
Share of Students in Public Universities	88%
Total Number of Employees at HEIs	297.389 (2009/10)
Average Annual Tuition Fees - Public Universities	€ 850,00 (2009/2010) ¹⁰
Average Annual Tuition Fees - All Universities (If available)	-
Unemployment Rate of Graduates	9,4% ⁹
Overall unemployment rate	20%
Average study time to complete bachelor level or equivalent	5 years
Average study time to complete master level or equivalent	2 years
Average Expenditure per Student per year	-
Average Percentage of Spending on Administration in HEI	-
Average Percentage of Spending on Research in HEI	-
Average Percentage of Spending on Teaching in HEI	55,8% - The proportion of running costs dedicated in education for teaching staff, according to OCDE 2010

⁷ INE - National Statistics Institute (2011).

⁸ CYD Fondation (2009) - Fundación conocimiento y desarrollo.

⁹ http://www.universidad.es/universities/spains_universities

¹⁰ FUCI - Federation of Independent Consumer Users (2009/10)

1.1.5. EU countries - Macro Analysis

Macro key findings of European countries at a glance:

- ❖ AT has the highest GDP per capita followed by DE, IT and ES;
- ❖ AT and DE – more universities in relation to the number of inhabitants and lower tuition fees than in ES and IT
- ❖ Higher expenditure on HE in AT and DE
- ❖ Great majority of universities in 4 countries is public;
- ❖ AT lowest graduate unemployment rate: 1,7% (4,3% total)
- ❖ ES highest graduate unemployment rate: 9,4% (20% total)
- ❖ Bologna process applies to all

Of the four EU countries, Germany is the most populated, followed by Italy, Spain and Austria, respectively. However, Austria maintains the highest GDP per capita at \$40.400 followed by Germany, Italy and Spain respectively. Italy and Spain have the highest number of inhabitants per number of higher education institutes, ranging between 600.000 and 700.000 while Germany and Austria have only between 100.000 and 200.000. From this statistic it may be assumed that German and Austrian citizens have better access to education. The data also indicates that annual tuition fees in Austria and Germany are lower than in Italy and Spain. The EU countries are under the Bologna Process which “[...] aims to create the European higher education area by harmonizing academic degree standards and quality assurance standards throughout Europe for each faculty and its development”. Being under this rule the EU countries must have their Bachelor and Master curricula adapted according to the standard of Bologna Process. Data shows that all four countries are following the standards; however in Italy we still see some deviation from the required time to complete a bachelor. Austria and Germany spend a higher percentage of the GDP on higher education. This is displayed in the government’s average expenditure per student per year. In Austria and Germany, this number ranges between 11,000 and 13,000 Euros which demonstrates the high level of investment in higher education, compared to 8,725 Euros in Italy. Italy spends less than 1% of their GDP on higher education. All four countries have a similar percentage between 65 and 85% of all universities being public. Austria is at the high end of the spectrum with 81.4% and Spain is the lowest with 66%, however, in all four countries, public universities hold the strong majority. This correlates with the overwhelming majority of students attending public universities as opposed to private universities ranging from 82.2% in Austria to 96% in Germany. The data indicates that Austria is the best country for employing graduates with a low unemployment rate for graduates of 1.7% compared to Spain’s high rate of 9.4%. This correlates perfectly with the overall unemployment rate in all four countries with the lowest one in Austria, being 4.3% and the highest in Spain, namely 20%. It can be concluded that there is no overwhelmingly large gap in government spending on higher education between these four European countries. However, it can also be seen that reducing tuition fees through government funding can encourage more citizens to study and by speculation, perhaps decrease unemployment rates.

1.2. SNA countries - Macro Data

1.2.1. Jordan

1.2.1.1. General Description

Located at the Middle East, northwest of Saudi Arabia, between Israel (to the west) and Iraq, the Hashemite Kingdom of Jordan has a total area of 89.342 km² and a population of 6.508.271. The capital is Amman and the whole territory is divided in 12 governorates.

1.2.1.2. Macro Data

JORDAN	2010
Population	6.508.271 ¹¹
GDP per Capita in \$ PPP	\$ 5.400
Overall Percentage of Population holding an Academic Degree	40.0%*
Total Spending on Higher Education in % of GDP	-
Total Number of Higher Education Institutions	27
Inhabitants/Nr. of HE Institutions	216.942
Number of Public Universities	10
Number of Private Universities	17
Share of Public Universities	37%
Total Number of Students	242.657
Total Number of Students - Public Universities (if available)	171.230
Total Number of Students - Private Universities (if available)	71.427
Share of Students in Public Universities	71%
Total Number of Employees at HEIs	8.038
Average Annual Tuition Fees - Public Universities	-
Average Annual Tuition Fees - All Universities (If available)	-
Unemployment Rate of Graduates	-
Overall unemployment rate	12,50%
Average study time to complete bachelor level or equivalent	4-5 years
Average study time to complete master level or equivalent	2-3 years
Average Expenditure per Student per year	-
Average Percentage of Spending on Administration in HEI	-
Average Percentage of Spending on Research in HEI	-
Average Percentage of Spending on Teaching in HEI	-

**This is a total of: 17.7% secondary education; 8.3% Intermediate Diploma; 14.0% Bachelor & Above.*

1. Financial Data is based on 2010 fiscal year. For the purposes of fair comparison, data were provided from the Final Accounts Sheet for each University (as it is on 31/12/2010),
2. Date of establishment of each University is provided and closed to its name,
3. In Jordan, there are 10 public Universities. Those Universities selected on the Benchmark sample were considered according to several factors including: location (south, mid and north); age; and total number of students,
4. Public Universities in Jordan work under umbrella of the Public Universities' Law 2009. This legislation requires each University to establish three councils: Board of Trustees; University's Council; and Deans' Council.

¹¹ CIA (2011). The World Factbook.

1.2.2. Lebanon

1.2.2.1. General Description

The Lebanese Republic has a territory of 10.400 km² and is located in the Middle East, bordering the Mediterranean Sea, between Israel and Syria. The capital is Beirut and the whole territory is divided in 6 governorates.

1.2.2.2. Macro Data

LEBANON	2010
Population	4.223.553
GDP per Capita in \$ PPP	\$ 14.400
Overall Percentage of Population holding an Academic Degree	28%
Total Spending on Higher Education in % of GDP	12%
Total Number of Higher Education Institutions	43
Inhabitants/Nr. of HE Institutions	98.222
Number of Public Universities	1
Number of Private Universities	42
Share of Public Universities	2%
Total Number of Students	180.000
Total Number of Students - Public Universities (if available)	80.000
Total Number of Students - Private Universities (if available)	100.000
Share of Students in Public Universities	44%
Total Number of Employees at HEIs	9.500
Average Annual Tuition Fees - Public Universities	US\$ 500,00
Average Annual Tuition Fees - All Universities (If available)	US\$ 7.500,00
Unemployment Rate of Graduates	12%
Overall unemployment rate	16%
Average study time to complete bachelor level or equivalent	3 years
Average study time to complete master level or equivalent	5 years
Average Expenditure per Student per year	US\$ 5.000
Average Percentage of Spending on Administration in HEI	12%
Average Percentage of Spending on Research in HEI	6%
Average Percentage of Spending on Teaching in HEI	45%

The source for the Lebanon macro data provided is the "international monetary fund" reports.

1.2.3. Palestine

1.2.3.1. General Description

The Palestinian territories comprise the West Bank and the Gaza Strip. Since the Palestinian Declaration of Independence in 1988, the region is recognized by three-quarters of the world's countries as the State of Palestine or simply Palestine. East Jerusalem is the proclaimed capital of Palestine.

1.2.3.2. Macro Data

PALESTINE	2010*
Population	4.048.000
GDP per Capita in \$ PPP	\$ 1502
Overall Percentage of Population holding an Academic Degree	16,10%
Total Spending on Higher Education in % of GDP	10,65%
Total Number of Higher Education Institutions	11
Inhabitants/Nr. of HE Institutions	88.000
Number of Public Universities	8
Number of Private Universities	3
Share of Public Universities	72,7%
Total Number of Students	196.625
Total Number of Students - Public Universities (if available)	102.840
Total Number of Students - Private Universities (if available)	5.085
Share of Students in Public Universities	52%
Total Number of Employees at HEIs	13.765
Average Annual Tuition Fees - Public Universities	€ 1.500,00
Average Annual Tuition Fees - All Universities (If available)	not available
Unemployment Rate of Graduates	25%
Overall unemployment rate	24%
Average study time to complete bachelor level or equivalent	4 years
Average study time to complete master level or equivalent	2 years
Average Expenditure per Student per year	€ 230,00 ¹²
Average Percentage of Spending on Administration in HEI	-
Average Percentage of Spending on Research in HEI	€ 750.000,00
Average Percentage of Spending on Teaching in HEI	€ 23.676.600,00

*Sources: Ministry of Education & Higher Education (MOEHD) and Palestinian Central Bureau of Statistics.

¹² It is important to point also that there are three types of Universities in Palestine: **Public Universities**, which are non-profit organizations (non-governmental), run by Board of trustees, and receive partial fund from government; **Governmental Universities**, funded fully by the government; **Private Universities** (Profit entities), run by Board of Directors and does not receive any funds from government. In this regard it is important know that the average percentage of spending on teaching allocated in the governmental budget to public universities only, not governmental one which have a separated budget funded fully by government. The amount stated in the "Average Expenditure per Student per year" include only the money the government give as support per students, not the real cost of them to the universities.

1.2.4. Syria

1.2.4.1. General Description

The Syrian Arab Republic has a territory of 185.180 km² and is located in the Middle East, bordering the Mediterranean Sea, between Lebanon and Turkey. The capital is Damascus and the whole territory is divided in 14 provinces.

1.2.4.2. Macro Data

SYRIA	2010*
Population	23.695.000
GDP per Capita in \$ PPP	\$ 4.800
Overall Percentage of Population holding an Academic Degree	20%
Total Spending on Higher Education in % of GDP	1,60%
Total Number of Higher Education Institutions	22
Inhabitants/Nr. of HE Institutions	1.077.045
Number of Public Universities	6
Number of Private Universities	16
Share of Public Universities	27%
Total Number of Students	500.000
Total Number of Students - Public Universities (if available)	436.000
Total Number of Students - Private Universities (if available)	11.000
Share of Students in Public Universities	87%
Total Number of Employees at HEIs	12.000
Average Annual Tuition Fees - Public Universities	€ 2.000,00
Average Annual Tuition Fees - All Universities (If available)	€ 2.000,00
Unemployment Rate of Graduates	6%
Overall unemployment rate	11%
Average study time to complete bachelor level or equivalent	5 years
Average study time to complete master level or equivalent	4 years
Average Expenditure per Student per year	€ 1.000,00
Average Percentage of Spending on Administration in HEI	20%
Average Percentage of Spending on Research in HEI	1%
Average Percentage of Spending on Teaching in HEI	40%

1.2.5. SNA countries - Macro Analysis

Macro key findings of Southern Neighboring Area countries at a glance:

- ❖ LB has highest GDP per capita, PS lowest
- ❖ Most HEIs in comparison to inhabitants in LB and PS
- ❖ Majority of universities in JO, LB and SY are private
- ❖ PS 8 of 11 HEIs are public
- ❖ In JO, SY and PS– most students in public HEIs
- ❖ In LB fairly evenly divided (44%, 66%)
- ❖ Unemployment rates for graduates high in all countries

Of the four SNA countries, the population of Syria at least triples the populations of Jordan, Lebanon and Palestine, whose population sizes decrease that order. Lebanon has by far the highest GDP per capita at \$14,400 and Palestine the lowest amounting to \$2,900. Lebanon and Palestine have the lowest numbers of inhabitants per number of higher education institutes ranging between 85,000 and 100,000 which shows that there might be better access to education than in Jordan and Syria. Although, this assumption is contradicted by the fact that Jordan has the highest percentage of the population holding academic degrees out of the four countries. Unfortunately, this contradiction cannot be further explained as we are missing key data on Jordan's tuition fees and government spending that would support this analysis. The majority of universities in Jordan, Lebanon and Syria are private as opposed to public. In fact, out of 43 universities in Lebanon, just one is public, and although this is the extreme case, the highest ratio is 33% public in Jordan. In Palestine, eight out of the eleven universities are public. An interesting point, however, is that although the majority of universities in these countries are private, the majority of students is attending public universities. There is an exception in Lebanon, where it is fairly evenly divided with 44% in the one public university. The unemployment level for graduates tends to be high in the SNA countries, although it correlates with the overall unemployment rate, which is also quite high, in each country. In Palestine, 25% of graduates are unemployed, and the overall unemployment rate is 24%, therefore it can be assumed that there are not many jobs available for anyone. This situation is similar in Lebanon and Syria with lower numbers, although they would still be considered relatively high on a global basis. The average government expenditure per student per year in these countries ranges from \$1,300 to \$5,000 USD. The statistics are missing in this area for Jordan. Palestine and Lebanon spend approximately the same percentage of GDP on higher education (10-12%) and Syria spends only 1.6%. The trends in the SNA countries are not very obvious; however they tend to favor private universities, perhaps underinvest in their education systems, and therefore maintain high unemployment rates.

2. Financial Management (FM) in Higher Education Institutions (HEIs) – Micro Analysis

2.1. Benchmarking study

2.1.1. Methodology

There are various tools that can be used for improvement and optimization processes in institutions and organizations. Benchmarking was chosen as the most suitable method for the analysis and comparison of HEIs subject to this study as it is an internationally recognized method for the improvement of processes.

Benchmarking is a **learning process** that is implemented by **comparing** activities/services/processes in order to find out comparative strengths and weaknesses, which are intended to serve as the basis for self-improvement (Jackson, Lund, 2000, p. 6). In a way, benchmarking constitutes a **mixture** of a **qualitative** and a **quantitative approach**. Price (1994) defined process benchmarking as “the quantitative analysis of what has been done, combined with the qualitative analysis of how it is done.”

In order to conduct benchmarking efficiently, a systematic approach should be followed. The macro-benchmarking of countries and the micro-benchmarking of HEIs were conducted based on the following 4-step-process:

1. *Normalization*

This step involves finding reliable and relational variables and indicators that put the set of data on a common basis. The benchmarking indicators were derived from the Micro benchmarking-Questionnaire on Financial management in HE applied to the universities participating in the study. Based on the data, 10 indicators were derived which can be clustered into four major areas (1. Funding Sources; 2. Structure, Norms, and Regulations; 3. Accountancy and IT Systems; 4. University Cooperation).

This study included data from four EU countries and 4 SNA partner countries. In order to increase the comparability of financial data, all data has been converted into EUR. Moreover, ratios have calculated in order to allow a better comparison of indicators, such as Inhabitants/HEIs, percentage of public/private HEIs, percentage of students in public/private HEIs.

2. *Validation*

This step comprises the review of data according to their reasonableness and relevance. In cases where data was not validated, partners have been contacted to clarify the information. Furthermore the issue of missing data might bias the outcomes of the study. In case of missing values, average values for the respective country have been calculated.

3. *Weighting of Indicators*

Due to the fact that not all indicators are of the same importance, an expert weighting of indicators has been conducted. The weighting was based on pairwise comparison including input from four higher education experts. Based on pairwise comparison, the following weights could be assigned to the indicators: (see pairwise template used in appendix 3).

Thematic group	Weight
Funding sources	
Mix of sources (avoid dependancy)	13
Structure, Norms and Regulations	
Average study time Bachelor (according to bologna process)	4
Average expenditure on Teaching	12
Average expenditure on Research	8
Average expenditure per student/year	16
Accountancy and IT System	
Usage of IT System	11
Existence of controlling unit	14
Usage of External financial controlling	6
University Cooperation	
N. of Industry partners	7
Annual revenue from industry cooperation	9

Score
1 lowest
3 highest

4. *Allocation of scores*

Sequent to the weighting of indicators, a scale for rating those indicators has been developed. For this study, a score range from 1 to 3, with 1 being the lowest and 3 being the highest possible score, has been considered as being the most appropriate method. The allocation of scores was based on benchmarks, norms or average values for the different indicators.

Limitations of Benchmarking

Besides the various advantages and benefits, benchmarking also has its limitations. A survey conducted in the UK by Hinton (Hinton, 2000) indicated that the main issues that inhibited successful benchmarking are finding appropriate partners for comparison, difficulties in comparing data, resource constraints and staff resistance. Furthermore, as benchmarking also often includes qualitative data, a lower level of comparability is given. The issue of missing data is also a key factor that might bias the results of a benchmarking study.

Conclusively there are quite a few limitations; however, benchmarking still serves as a valuable tool for improvement processes. The reason for this is that by comparing numerous different indicators and key data with considering influencing backgrounds at the same time, risk of bias may be decreased and a more or less representative image of the actual situation can be provided.

2.2. Micro data – EU Countries

2.2.1. HEIs in Austria

AUSTRIA		University 1	University 2	University 3	University 4
Funding Sources	Private [%]	-	3,44		
	Public [%]	100%	81,83	77 €million (68%)	
	Tuitions [Overall and Percentage of total Budget]	4%	-	15,3 € million (13,5%)	
	Donations	0%	-	Executive education: 7.9 € million (7%)	
	Through Projects (incl. Funding and Company/Private)	6%	8,36	Research grants: 6,5 € million (5,7%)	57,2 million
	Sponsoring	0%	-	Financial Income: 1,1 million (1%)	
	Others (please Specify)	-	6,37	5,5 € million (4,8%)	
Organizational Structure, Norms and Regulations	Legal Form of the Institution	Non-profit private Body - Gemeinnützige Privatstiftung	Gesellschaft mit beschränkter Haftung		
	Total Number of Employees	211 (FTEs per end 2010)	486		1,871.48 ¹
	Average Expenditure per Student per year	13.700,- Euros p.a.	11901,6		
	Average study time to complete bachelor level or equivalent	6 semester / 3 years	3 years		11-17 semesters
	Average study time to complete master level or equivalent	4 semester /2 years	2 years		11-17 semesters
	Average Percentage of Spending on Administration in HEI	15%	30%	Operational expenses: 33.8 € million (31,5%)	
	Average Percentage of Spending on Research in HEI	8%	9%	Personnel expenses: 67 € million (62,5%)	is included in the teaching expenditure below
	Average Percentage of Spending on Teaching in HEI	65%	61%		58% of federal budget
Please describe shortly the internal procedure for budgeting at your institution.	Top management midterm budget guidelines; decentralized budgets for teaching (per curriculum) and for research (per research area) and for	Based on the federal norm cost model - this is a study places related federal fund calculation model where financing volume is based on the type of curriculum (technical vs. Non-			

	central services; management team meetings for budgeting		technical) and the norm place number. Hereby, the norm places number is a federally fixed maximum number of funded study places of one degree program. Method for assigning regional funding: Funding is based on a global budget which is distributed across institutions and study-programs. Method for assigning research and development funding: Funding depends on the pro-active activities of the HEI. State has to fund university - budget agreed for three years, whole amount is divided into basic budget and formula-bound budget. Uni received global budget (basic budget and formula bound (20%)) which is determined in advance for three years - each university receives its share based on quality and quantity indicators (teaching, R&D, social goals) Uni has to display other revenues as well.
	How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organogram of the Organization or Role and Responsibility descriptions of Key Personnel)?	scientific body: rector + 8 heads of school; commercial body: board of directors, executive director & department heads	Rector (Scientific Director), Commercial Director, General Assembly, Supervisory Board
Accountancy and IT System	Accountancy Standard (National, IFRS, US Gapp, Other...)	National	National
	Usage of IT Systems for Accountancy (YES/NO) If Yes - Which?	YES MACH	Yes SAP
	Is there a controlling unit/department within the Institution?	YES	Yes
	Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?	Certified Public Accountant	yes, several (required by law) - external auditor - certifying every annual report, court of auditors by city, control on regional and national level, further controls for every funded project (auditing companies/funding

		institutions)	
	Budget Cycle Time	01.01.-31.12	1 fiscal year (July to June)
University - Industry Corporation	Number of Partners in the Industry	55	462
	Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.)	€ 1,75 Mio p.a.	€ 1.957.359
	Form of Partnership with Industry Partners (Please Briefly Explain)	Cooperation Agreements; Subcontracts	projects on contract basis
Contract Policies	Please describe the IPR policies your university follows when working with external partners in R&D	Legal counseling with R&D contracts	IPR Clause in every contract (offer, contract, employment/study contracts), minimum request is permission to use materials in teaching, standard clauses are used
	Please describe product or IPR valorization policies (how is IPR marketed and sold at your university)	Technology Transfer via wholly owned subsidiary (research company)	No general policy - no spin offs (not allowed), Shared IPR in Contracts defined
	No. of Patents owned by the university	1	1 (2 are in process of registering, 1 was sold for 13.000 EUR, 1 further expired)
	Annual Revenues from marketing Patents or other IPR	0	not applicable
	Does your institution have a dedicated IP management unit/office?	NO	No, is dealt with in legal department
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	Inventions; R&D competence	Patents, Gebrauchsmuster, Shared IPR rights

2.2.2. HEIs in Germany

GERMANY					
		University 1	University 2	University 3	University 4
Funding Sources	Private [%]	121.382.000 € (42%) [2010]	258Mio. € (37,3 %) [2010]	38 Mio. € (66,5 %) [2009]	16,2 Mio. € (66%) [2009/2010]
	Public [%]	170.232.000 € (58%) [2010]	412 Mio. € (59,5 %) [2010]	5,1 Mio. € (9%) [2009]	
	Tuitions [Overall and Percentage of total Budget]	3.168.452 € (1%) [2010]	22,1 Mio € (3,2 %) [2010]	14 Mio. € (24,5%) [2009]	8,3 Mio. € (34%) [2009/2010]
	Donations	693.208 € (0,25%) [2010]	not available	1,4 Mio. € [2009]	
	Through Projects (incl. Funding and Company/Private)	63.049.811 € (21,6%) [2010]	161,8 Mio. € [2010]	9,2 Mio. € [2009]	2,4 Mio. € [2009/2010]
	Sponsoring	419.196 € (0,14%) [2010]	16 Mio. € [2010]	not available	not available
	Others (please Specify)	5.698.988 € (2,01%) [2010]	15 Mi. € [2010], Foreign Countries. individuals. other universities		
Organizational Structure, Norms and Regulations	Legal Form of the Institution	corporation under public law	corporation under public law	Private, independent university, registered as a not-for-profit organization	Private, independent university, endowment college
	Total Number of Employees	3308 [2010]	7992 [2010]	505 [2010]	251
	Average Expenditure per Student per year	14.200 [ISCED 5a/6, 2007,]	11.100 [ISCED 5a/6, 2007]	12.400 [ISCED 5a/6, 2007)	9.900 [ISCED 5a/6, 2007)
	Average study time to complete bachelor level or equivalent	not applicable	only for every course of study available	not applicable	not applicable
	Average study time to complete master level or equivalent	not applicable	only for every course of study available	not applicable	not applicable
	Average Percentage of Spending on Administration in HEI	16%	not available	not available	not available
	Average Percentage of Spending on Research in HEI	55%	not available	not available	not available
	Average Percentage of Spending on Teaching in HEI	29%	not available	not available	not available
Please describe shortly the internal procedure for budgeting at your institution.	At first the university board planned the strategy for the University. They fixed that in the university development plan (UEP) that is orientated on the corporate principles. The organization unities plan for their part taking into account the default of the				

		<p>UEP her content advancement again.</p> <p>Then the detailed planning occurs on the basis of the appointed professors, her claims, the central institutions and the default from UEP</p> <p>The budget planning occurs after cost categories and cost centers. The claims of the professors from the appeal negotiations are converted on the base by university-internal average rates in a budget. The tangible and investments means according to appeal arrangement. In addition rests from the year before will transfer</p> <p>Finally there is the possibility of additional funds as to get through an indicator-based allocation of resources.</p>			
	How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organogram of the Organization or Role and Responsibility descriptions of Key Personnel)?	look at the Organogram – appendix 2 – DE1	look at the Organogram – appendix 2– DE2	Independent board of governors: sets overall policies The president, who heads the institution, is hired by the board of governors	Independent endowment board of directors The rector who states the equipment is done by the endowment board of directors
Accountancy and IT System	Accountancy Standard (National, IFRS, US Gapp, Other...)	National, HGB (BilMoG)	National, HGB (BilMoG)	National, HGB (BilMoG)	National, HGB (BilMoG)
	Usage of IT Systems for Accountancy (YES/NO)	YES	Yes	Yes	Yes
	If Yes - Which?	SAP R/3	HIS FiBu	not available	not available
	Is there a controlling unit/department within the Institution?	YES, the staff unit Controlling	Department 6.0 - Planning, Development and Controlling	Yes, Business Administration	Controlling/Management Control
	Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing	YES (external auditing company for every year)	YES (external auditing company for every year)	YES (external auditing company for every year)	YES (external auditing company for every year)

company, etc.)?					
	Budget Cycle Time	yearly	yearly		academic year
University - Industry Corporation	Number of Partners in the Industry	~800 [>10.000 sales volume]	> 3000 [Research and industry partner]	> 1000 [research & industry partners]	> 500 [research & industry partners]
	Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.)	11 Mio. €	60,6 Mio. €	9,2 Mio. €	9,8 Mio. €
	Form of Partnership with Industry Partners (Please Briefly Explain)				
Contract Policies	Please describe the IPR policies your university follows when working with external partners in R&D	Cooperation, R&D contracts	Cooperation, R&D contracts	Cooperation, R&D contracts	Cooperation, R&D contracts
	Please describe product or IPR valorization policies (how is IPR marketed and sold at your university)				
	No. of Patents owned by the university				
	Annual Revenues from marketing Patents or other IPR		No information available	No information available	No information available
	Does your institution have a dedicated IP management unit/office?		No information available	No information available	No information available
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	~ 230 (Invention announcements); ~20 (Patent applications)	~40 (Patent applications)	40 (Patent applications)	No information available

2.2.3. HEIs in Italy

ITALY				
		University 1	University 2	University 3
Funding Sources	Private [%]	47%	50%	44%
	Public [%]	53%	50%	56%
	Tuitions [Overall and Percentage of total Budget]	40.667.000 € (9%)	31.595.000 € (8%)	11.520.000 € (5%)
	Donations	0%	0	0
	Through Projects (incl. Funding and Company/Private)	64.365.411 € (14%)	38.587.640 € (10%)	10.334.691 € (5%)
	Sponsoring	0%	0%	0%
	Others (please Specify)	Government 53% + loans 3% + various 21%	Government 50%, estate sale 5%, various 27%	Government 51%, various 39%
	Organizational Structure, Norms and Regulations	Legal Form of the Institution	Public University	Public University
Total Number of Employees		2.844	2.058	1.385
Average Expenditure per Student per year		9.560 €	12.412 €	7.363 €
Average study time to complete bachelor level or equivalent		4,8	n.a.	5
Average study time to complete master level or equivalent		2,7	n.a.	n.a.
Average Percentage of Spending on Administration in HEI		33,3%	33,3%	33,3%
Average Percentage of Spending on Research in HEI		33,3%	33,3%	33,3%
Average Percentage of Spending on Teaching in HEI		33,3%	33,3%	33,3%
Please describe shortly the internal procedure for budgeting at your institution.		The process has to be considered like a mixed one between the top down and the bottom up procedures. It could be called a "federative" one because it is based upon the idea of university as "federation" of structures having wide autonomy. The process of planning departs from the autonomous structures to arrive to the central level, in which the structures are widely represented, and where it is operated just the technical link of the decentralized decisions.	Top-down (the process of realization of the budget forecast follows a vertical descending rationale).	Bottom-up (the process of realization of the budget forecast follows a vertical ascending rationale).

	<p>How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organogram of the Organization or Role and Responsibility descriptions of Key Personnel)?</p>	<p>There are authorities that have political, strategic planning and decisions-making relevance, such as: - Rector and Managing Director, Academic Council, Management Board; - Faculties and departments i.e. units in which activities of institutional didactics, research, training and activities "on-demand" are developed.</p> <p>Furthermore there are other authorities having statutory relevance, such as: Observatory on the University activity; Peer Committee for didactic and right to study; Gender equality board; Evaluation board; Auditors of accounts; Faculties and Departments Councils.</p>	<p>Rector, vicar rector, vice-rector and rector delegates, Administration Board, Academic Council, University Committee, Department Managers Council, Auditors Board, Gender equality Board, Sport Committee, University panels, Evaluation.</p>	<p>Rector, vice-rector, rector delegates, Administration Board, Academic Council, Administrative Manager, Auditors Board, Department Managers Council, Sport Committee, Ombudsman, Student Council, Technical - Administrative Staff Counsel, Gender Equality Board.</p>
<p>Accountancy and IT System</p>	<p>Accountancy Standard (National, IFRS, US Gapp, Other...)</p>	<p>National</p>	<p>National</p>	<p>National</p>
	<p>Usage of IT Systems for Accountancy (YES/NO)</p>	<p>Yes</p>	<p>Yes</p>	<p>Yes</p>
	<p>If Yes - Which?</p>	<p>Self-made by ITC Service Centre, based upon Oracle SQL.</p>	<p>Software package provided and maintained by CINECA. It is a nonprofit Consortium, made up of 50 Italian universities, the CNR (National Research Council), and the Ministry of Education, University and Research (MIUR). Today it is the largest Italian computing center, one of the most important worldwide.</p>	<p>Software package provided and maintained by CINECA. It is a nonprofit Consortium, made up of 50 Italian universities, the CNR (National Research Council), and the Ministry of Education, University and Research (MIUR). Today it is the largest Italian computing center, one of the most important worldwide.</p>
	<p>Is there a controlling unit/department within the Institution?</p>	<p>Yes, there is a support unit, directly and hierarchically inserted into the general manager office, the Service for Statistics, Planning and Evaluation.</p>	<p>Yes, there is the IT Department, with the Services for Management Automation and Technology Infrastructure Administration.</p>	<p>Yes, the IT Service which provides continuous assistance and the development of Informative Systems.</p>
	<p>Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?</p>	<p>The activity of financial controlling is carried out by two compulsory Statutory boards, which have a mixed composition: - Auditors Board, which supervises the university budget, finance and accountancy; it is named by the Rector after a proposal of the Management Board and is composed by four external members (Ministry of University and Research expert, Ministry of Economy and Finance expert, Court of the Accounts official, professional financial adviser).</p>	<p>The audits are performed by the Auditors Board, as foreseen in the Statute.</p>	<p>The audits are performed by the Auditors Board.</p>

		- Evaluation Board, which has the task to get info and carry out evaluation about efficiency and effectiveness of administrative, teaching, research activities and of university units, and to officially report to the Ministry, by comparative methods of cost-benefits. It is appointed by the Rector on proposal of the Academic Council and composed by six members: 3 teachers, 1 manager, 2 external experts.		
	Budget Cycle Time	Yearly	Yearly	Yearly
University - Industry Corporation	Number of Partners in the Industry			
	Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.)	43.400.000	10.415.000	5.291.000
	Form of Partnership with Industry Partners (Please Briefly Explain)	<p>Statutory board is the Observatory on University Activities having task to carry out information collection, assessments, surveys, suggestions aimed at strengthening links between University and social and economic environment.</p> <p>The scientific department is organizational unit aimed at performing of studies, surveys, researches, consulting, training and other activities “on demand”. It has financing autonomy by its own budget and its own current/account.</p> <p>The Service for scientific research support is aimed at supporting projecting and management of national research projects, E.C. programs and initiatives with specific reference to the “Framework Program”, territorial scientific cooperation, auditing and reporting desk.</p>	<p>In order to strengthen the relationships between University and enterprises the University has established a Technological District; it has the task to increase the growth of the local economic and industrial system by promoting and supporting the setting-up of new innovative enterprises, as well as attracting the already existing innovative enterprises oriented to research and planning and support of technological and management processes in the firms operating in the area, both in industrial and services field. The innovative enterprises present in the Technological District have the opportunity to use spaces and structures personalized in coherence with their own specific functional needs and to create synergies and links with other enterprises.</p> <p>Furthermore, the enterprises operating in the TD have the possibility to cooperate with researchers of the different university departments and research institutions, and at the same time with students, doctoral candidates and</p>	<p>The Observatory on Research aims at monitoring, analyzing and evaluating the scientific activity of the University, as well as implementing guidelines for the improving of quality and, particularly, the allocation of resources dedicated to research. To this aim, the Observatory has refined and periodically updates specific indicators and criteria for the analysis and evaluation of the University scientific activity. The Observatory has implemented also the Research Registry. The evaluation of the research activity involves the following aspects: PhD courses, development of scientific and cultural initiatives, attractiveness capability of resources for research, involvement of professors and researchers in international institutions and in important national entities which carry out research promotion and planning activities, excellence of the reached outcomes.</p>

graduates.

Contract Policies

Please describe the IPR policies your university follows when working with external partners in R&D

Please describe product or IPR valorization policies (how is IPR marketed and sold at your university)

The Service for innovation and technological transfer is involved in University, entrepreneurs and technological transfer (joint projects for university spin-off), Industrial Liaisons Office (networking projects for strengthening cooperation between technological research and the local / national industrial production) and Intellectual property and commercial exploitation (see below).

The Service for Innovation and Technology Transfer has the task to strengthen the liaison between research and industries through the transfer of the technologies developed within the University and the implementation of joint projects.

The University has strongly focused on a system which promotes relationships with business associations, partnership and employer's associations and professionals. In 2000 Industrial Liaison Office - (ILO) was created with the following functions:

- offer assistance to students supplying written information on curriculums, job seeking, and educational training opportunities available after graduation.
- establishing relations with professional orders, chamber of Commerce, local businesses, and employer associations.
- developing and implementing a databank service for graduate students, with an integrated web database application, completely free, that essentially involves around businesses from the;
- coordinating activities connected to AlmaLaurea;
- stimulating and supporting the creation of associations of alumni to organize meetings with students, faculty staff and graduates; follow-up on students after graduation to see how they have fared;
- promoting university patents and the study of their potential uses;
- supporting Spin-Off enterprises;
- promoting, processing and approving agreements for internships and apprenticeships.

No. of Patents owned by the university

The specific Service acts supporting financial and juridical frame of technological transfer by patents-oriented activities and the business exploitation of the university activities. Furthermore the University promotes the High Technology Districts, i.e. clusters of big companies,

The Centre for Innovation and Technology Transfer manages the procedures for the depositing of patents, supporting the inventors. It also hosts a Patent Information Point, which provides an information service on patent laws; it also conducts ex-ante surveys aimed at

There is a specific service at Uni concerning IPR, called Patent Office. It deals with every step towards the depositing of a patent, from the feasibility analysis to the commercial exploitation of the new invention.

	SMEs, research centers, public authorities, associations of enterprises and financial institutions operating in a specific territory.	monitoring the technique state and checking the new inventions.	
Annual Revenues from marketing Patents or other IPR	45 (Forty-five)	5 (Five)	16 (Sixteen)
Does you institution have a dedicated IP management unit/office?	n.a.	n.a.	n.a.
In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	Yes, the above-mentioned Service for Innovation and Technology Transfer.	Yes, the Service for Innovation and Technology Transfer.	Yes, the Technology Transfer Service.

2.2.4. HEIs in Spain

SPAIN			
	University 1	University 2	University 3
Type of University	Public	Public	Public
Funding Sources			
Private [%]			
Public [%]			
Tuitions [Overall and Percentage of total Budget]	Fees: 22.535.000 € Total Budget : 199.698.129 € Percentage : 11,28%	2011 Tuitions : 41.274.48 € Total : 286.863.883 € Percentage 14,38%	not available
Donations	0%	0	20%
Through Projects (incl. Funding and Company/Private)	10%	13%	
Sponsoring			
Others (please Specify)	Public	Public	Private
Organizational Structure, Norms and Regulations			
Legal Form of the Institution	public law	public law	Foundation (law 8/1993)
Total Number of Employees	Administrative (1312) + Academics(2371)=3683	Administrative(976) + academics(1310)=2286	administrative(276) + academics (922)=1196
Average Expenditure per Student per year	854 €	1.056 €	8.075 €
Average study time to complete bachelor level or equivalent	3 years	3 years	3 years
Average study time to complete master level or equivalent	2 years	2 years	1 year
Average Percentage of Spending on Administration in HEI		42%	
Average Percentage of Spending on Research in HEI	14.95%	15.17%	
Average Percentage of Spending on Teaching in HEI	77%	7500%	23
Please describe shortly the internal procedure for budgeting at your institution.	Not available	Not available	Not available
How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organogram of the Organization)	Governing bodies: --.The Social Council (Consejo Social): is the body intended to represent the public interest and act as a bridge between society and the university.	Governing bodies: --.The Social Council (Consejo Social): is the body intended to represent the public interest and act as a bridge between society and the university.	1.Rector Manager General secretary University defensor Vicerrectorates (4)

<p>or Role and Responsibility descriptions of Key Personnel)?</p>	<ul style="list-style-type: none"> • The Governing Council (Consejo de Gobierno): is the university's main governing body. It sets out the strategic and programmatic lines for teaching, research, human and financial resources, as well as the guidelines and procedures for their application. • The University Assembly (Claustro Universitario): brings together the entire university community. With a membership of up to 300 people, it comprises the Rector (the chairperson), the Secretary General, the Manager and representatives of all groups within the university and the community. • The School and Faculty Councils and Departmental meetings: the Faculties or Schools elect councils chaired by the Dean or Director. The majority of the members are teachers or professors with a permanent appointment at the university. • Individual roles: Rector, Vice-Rector, Secretary General, Manager, Faculty Deans, School, Department and Institute Directors of Research. 	<ul style="list-style-type: none"> • The Governing Council (Consejo de Gobierno): is the university's main governing body. It sets out the strategic and programmatic lines for teaching, research, human and financial resources, as well as the guidelines and procedures for their application. • The University Assembly (Claustro Universitario): brings together the entire university community. With a membership of up to 300 people, it comprises the Rector (the chairperson), the Secretary General, the Manager and representatives of all groups within the university and the community. • The School and Faculty Councils and Departmental meetings: the Faculties or Schools elect councils chaired by the Dean or Director. The majority of the members are teachers or professors with a permanent appointment at the university. • Individual roles: Rector, Vice-Rector, Secretary General, Manager, Faculty Deans, School, Department and Institute Directors of Research. 	<p>a)Ordenación académica y Posgrado b)Investigación c)Relaciones Internacionales d)Profesorado</p>	
<p>Accountancy and IT System</p>	<p>Accountancy Standard (National, IFRS, US Gapp, Other...)</p> <p>Usage of IT Systems for Accountancy (YES/NO)</p> <p>If Yes - Which?</p> <p>Is there a controlling unit/department within the Institution?</p> <p>Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?</p> <p>Budget Cycle Time</p>	<p>National</p> <p>yes</p> <p>SAP</p> <p>financial management department</p> <p>YES (external auditing company for every year)</p> <p>annual</p>	<p>yes</p> <p>SIC</p> <p>YES (external auditing company for every year)</p> <p>annual</p>	<p>yes</p> <p>SAP</p> <p>YES (external auditing company for every year)</p> <p>annual</p>
<p>University - Industry</p>	<p>Number of Partners in the Industry</p>	<p>523(2010)</p>		<p>123 (including local govts)</p>

Corporation	Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.)	6,5 M	approx. 7.8M	not available
	Form of Partnership with Industry Partners (Please Briefly Explain)			not available
Contract Policies	Please describe the IPR policies your university follows when working with external partners in R&D	We follow internal rules (UA's Norms for IP 2008) as well as the contracts in case of public funding		N/A
	Please describe product or IPR valorization policies (how is IPR marketed and sold at your university)	Depending on the case. SGITT-OTRI is the implementation of these policies following the procedures stated in University's Norms 2008	The Promotion of Technology and Knowledge (Promocion Tecnologica y de Conocimiento) under the OTRI-UAM is in charge of this issue.	N/A
	No. of Patents owned by the university	14	243	N/A
	Annual Revenues from marketing Patents or other IPR	Not available	Not available	N/A
	Does your institution have a dedicated IP management unit/office?	Yes, SGITT-OTRI. Transknowlia at the Office for the Management of International Projects (OGPI) gives additional advice depending on the concrete case		OTRI - UAM (Office for the Transfer of Research Results)
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	Patents, Utility models, Trademarks, Copyright (software + databases)		N/A

2.2.5. Benchmark scores – EU Countries

1. *Funding Sources*

1.1. Mix of sources (avoid dependency)

- (1) 1 source
- (2) 2-4 sources
- (3) More than 4 sources

2. *Structure, Norms, and Regulations*

2.1. Average study time Bachelor (according to bologna process)

- (1) More than 8 or less than 6
- (2) 7-8 semesters
- (3) 6 semesters

2.2. Average expenditure on Teaching

- (1) Less than 40%
- (2) 40-60%
- (3) More than 60%

2.3. Average expenditure on Research

- (1) Less than 10%
- (2) 10-20%
- (3) More than 20%

2.4. Average expenditure per student/year

- (1) Less than 9,000 €
- (2) 9,000 € to 10,000 €; more than 14,000 €
- (3) 10,000 € -14,000 €

3. *Accountancy and IT Systems*

3.1. Usage of IT System

- (1) No usage
- (2) Internal/own system
- (3) Sophisticated tool (SAP, oracle...)

3.2. Existence of controlling unit

- (1) No existence
- (2) *Not applicable score*
- (3) Yes

3.3. External financial controlling

- (1) No existence
- (2) *Not applicable score*
- (3) Yes

4. University Cooperation

4.1. Number of Industry partners (*ratio #partners/#employees*)

- (1) Less than 0.5
- (2) 0.5-1
- (3) Greater than 1

4.2. Annual revenue from industry cooperation (*ratio #revenue/#employees*)

- (1) Less than 5,000 €
- (2) 5,000 €-15,000 €
- (3) Greater than 15,000 €

2.2.6. Benchmarking analysis – EU Countries

Benchmarking overall ranking and major results at a glance:

- ✓ **Austrian** universities got **overall highest scores** (1st, 3rd, 5th);
- ✓ **Germany** followed by 2nd, 4th, 6th and 11th ranks;
- ✓ **Italy** scored 7th, 10th, 13th;
- ✓ **Spain** scored 8th and 12th
- ✓ German universities have the best **mix of funding sources**;
- ✓ Spanish universities have **higher expenditure in teaching** as Austrian ones;
- ✓ Italy achieved the highest score in **research expenditure** (over 20% of budget);
- ✓ Germany has higher **number of industry partners** as well as the highest revenue out of this kind of cooperation, followed by Austria, Italy and Spain;
- ✓ Average **expenditure per student**:
 - Austria and Germany – amount is in general between €10.000 and €14.000;
 - Italy scored in all 3 levels;
 - Spain below €9.000.
- ✓ All European universities:
 - Have **controlling unit**;
 - Use **IT system** for accounting and financial controlling;
 - Have **external financial controlling**.

The EU universities that participated in the study were ranked based on ten different indicators (described above sections 2.2.1 and 2.2.2) of varying weights. The Austrian universities obtained the highest overall scores ranking 1st, 3rd, and 5th. The German universities followed with the 2nd, 4th, 6th, and 11th, ranking scores. The Italian and

Spanish universities were very closely ranked, with 7th, 10th and 13th places in Italy and 8th and 12th in Spain. The indicators were subdivided into four different categories; Structure, Norms and Regulations, Accountancy and IT System, University Cooperation, and Funding sources, listed from most important to least important, respectively. The most important indicator in the ranking process, falling under the Structure, Norms and Regulations category, is the “Average expenditure per student/year”. All of the Austrian universities, two of the three German universities and one of the Italian universities ranked the highest score possible, with an average expenditure between €10,000 and €14,000 without going above or below. All of the Spanish universities spend less than € 9,000 per year, this could be linked to their lower performance overall, as a correlation could be investigated between this indicator and the overall financial management quality of a university. The second most important indicator falls under the Accountancy and IT System category and it is the “Existence of a controlling unit”. Every university achieved the same score under this indicator as they all have controlling units within their institutions. However, with the existence of a controlling unit it is also important to consider how efficiently and frequently it is in use. This is somewhat related to the indicator “Usage of IT System” which almost all of the universities also achieved the highest score possible, indicating the use of a sophisticated tool such as SAP or oracle. The only universities that use an internal system were the Italian ones, and therefore, they achieved slightly lower scores. The next most important indicator is the Average expenditure on Teaching. These scores break the previously seen trend as although Austria maintains the highest scores, Spain is second followed by Germany and Italy. However, sufficient data was not provided for the German universities and therefore, average scores were assumed. It may be interesting to notice that Spanish universities spend the most on their teachers, yet the least on their students in comparison to the other universities; this could be another factor contributing to their overall low ranking. Another indicator that easily fits with the comparison of spending on teachers and students is the expenditure on research. Italy achieved the highest scores for expenditure on research, meaning that they spend over 20%. This could indicate that Italian universities are more innovation driven as they invest higher amounts in research. Austria had the lowest scores with less than 10% in two of the three Austrian universities. However, the third university matched Italy’s score which could indicate that the research in the Austrian education system is more concentrated, although this is only speculation. The German and Spanish universities maintained average scores. The next indicators to take into analysis are both within the University Cooperation category, accounting for the number of industry partners each university has, as well as the annual revenue to the university from these industry partners. Germany was the highest ranked in this category, followed by Austria, Italy and Spain. All of the Spanish universities have little cooperation with industry. The Italian universities have few partners in relation to the annual revenue which could indicate that their partners are very influential, whereas the German universities have many partners and high revenue. Austrian universities achieved average scores with no obvious trends. The final important indicator to consider is the mix of sources that provide funding for the universities. German universities had the highest scores with more than four sources in three of four universities, and every other university has between two and four sources except for one higher ranking in Austria. The highest ranking universities overall were in

Austria and Germany. These universities maintained the highest scores in the most important indicators which are expenditure per student/year, existence of a controlling unit, average expenditure on teaching, and the mix of sources providing funding to the university.

2.3. Micro data – SNA Countries

2.3.1. HEIs in Jordan

JORDAN		University 1	University 2	University 3	University 4	University 5	University 6	University 7
Funding Sources	Private [%]	0%	0%	0%	0%	0%	0%	100%
	Public [%]	18.75% (3.635.680,00 €)	60.82% (Gov. aid 6.818.220,00 € + loans' settlements paid by Gov. 4.826.630,00 €)	0%	3.27% (2.320.590,00 €)	22.9% (9.484.010,00 €)	47.63% (7.850.970,00 €)	0%
	Tuitions [Overall and Percentage of total Budget]	50.6% (9.814.940,00 €)	32.18% (6.160.700,00 €)	67.35% (24.371.000,00 €)	62.83% (44.579.000,00 €)	68.9% (28.526.000,00 €)	23.59% (3.889.350,00 €)	5.186.560,00 € = 98%
	Donations	0.13% (25.408,70 €)	0,00%	0% (10.538,20 €)	0.00% (5.269,11 €)	2.3% (970.594,00 €)	1.4% (231.841,00 €)	1%
	Through Projects (incl. Funding and Company/Private)	0,00%	0,00%	0%	0,00%	0,00%	0,00%	1%
	Sponsoring	0,00	0,00%	0%	0,00	0,00	0,00	0%
	Others (please Specify)	30.48% (5.910.840,00 €)	7.00% (1.339.320,00 €)	32,64%	33.90% (24.542.000,00 €)	5.83% (2.415.790,00 €)	27.35% (4.508.960,00 €)	0
Organizational Structure, Norms and Regulations	Legal Form of the Institution	Public University	Public University	Public University	Public University	Public University	Public University	Private University
	Total Number of Employees	1.387	1.109	1.562	1.545	2.710	719	1682
	Average Expenditure per Student per year	1.338,04 €	1.645,96 €	1.249,83 €	2.662,90 €	2.424,91	1.738,23 €	3.016,04 €
	Average study time to complete bachelor level or equivalent	4 years	4 years	4-5 years	4-5 years	4 years	4 years	4 years
	Average study time to complete master	2-3 years	NA	2-3 years	2-3 years	2-3 years	NA	2 years

level or equivalent							
Average Percentage of Spending on Administration in HEI	40%	37%	37%	38%	53%	35,24%	35%
Average Percentage of Spending on Research in HEI	5%	3%	5%	8%	2%	11%	3%
Average Percentage of Spending on Teaching in HEI	43%	25%	26%	41%	39%	28%	25%
Please describe shortly the internal procedure for budgeting at your institution.	The university utilizes "the needs-based approach" to build its budget. Data to be collected from all units during the last quarter of the year. Similar items to be aggregated based on priorities and fund available for the next year.	Data to be collected from academic and admin. units according to their needs, later, aggregation to be carried out into a formal budget based on priorities and fund available.	Data to be collected from academic and admin. units according to their needs. Items to be aggregated by the budgeting section electronically.	Data to be collected from academic and admin. units according to their needs. Central gathering of items is performed in order to gain an aggregated budget based on fund available.	Data related to the needs of academic and admin. units to be collected. Within the finance unit, aggregation to be carried out in order to great a budget (based on operational priorities).	Data to be collected from academic and admin. units according to their needs. In a next stage, aggregation of figures to be carried out and then budget's accounts to be classified.	first: financial department calculate the tuition fees & the other Sources of revenue Second: financial department calculate the operating expenses (including salaries) Third: the schools (faculty) & the departments prepare their capital expenditure Four : Prepare the total budget
How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organogram of the Organization or Role and Responsibility descriptions of Key Personnel)?	Board of Trustees is the head strategic player (Chairman and members should be independent from the University), followed by the University's Council (Uni's President is a head with around 20 members from inside and outside the Uni.), and	Board of Trustees is the head strategic council (Chairman and members should be independent from the University), followed by the University's Council (Uni's President is a head with around 20 members from inside and outside the Uni.), and	Board of Trustees; University's Council; and Deans' Council (Academic Senate).	Board of Trustees; University's Council; and the Deans' Council (Academic Senate).	Board of Trustees; University's Council; and Deans' Council (Academic Senate) - These councils are established according to the Jordanian Public Universities Law.	Board of Trustees; University's Council; and Deans' Council (Academic Senate) - These councils are established according to the Jordanian Public Universities Law.	

		finally, the Deans' Council (Academic Senate).	finally, the Deans' Council (Academic Senate).					
Accountancy and IT System	Accountancy Standard (National, IFRS, US Gapp, Other...)	NA (Public Acc. Model - cash based Acc.)	NA (Public Acc. Model - cash based Acc.)	NA (Public Acc. Model - cash based Acc.)	NA (Public Acc. Model - cash based Acc.)	Gov. Standards (Public Acc. Model - cash based Acc.)	NA (Public Acc. Model - cash based Acc.)	IFRS
	Usage of IT Systems for Accountancy (YES/NO)	Yes	Yes	Yes	Yes	Yes	Yes	yes
	If Yes - Which?	In-house developed	In-house developed	In-house developed	In-house developed	In-house developed	In-house developed	oracle
	Is there a controlling unit/department within the Institution?	Yes (Internal Control Unit)	Yes (Internal Control Unit)	Yes (Internal Control Unit)	Yes (Internal Control Unit)	Yes (Internal Control Unit)	Yes (Internal Control Unit)	yes
	Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?	Yes (Audit Bureau - Gov.)	Yes (Audit Bureau - Gov.)	Yes (Audit Bureau - Gov.)	Yes (Audit Bureau - Gov.)	Yes (Audit Bureau - Gov.) and External Independent Public Accounting Auditors	Yes (Audit Bureau - Gov.)	yes
	Budget Cycle Time	Fiscal year (1st Jan. -31st Dec.)	Fiscal year (1st Jan. -31st Dec.)	Fiscal year (1st Jan. -31st Dec.)	Fiscal year (1st Jan. -31st Dec.)	Fiscal year (1st Jan. -31st Dec.)	Fiscal year (1st Jan. -31st Dec.)	Fiscal year (1st Jan. -31st Dec.)
University - Industry Corporation	Number of Partners in the Industry							
	Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.)	105.382,00 €	52.691,10 €	26.345,50 €	298.442,00 €	5.269,11 €	6.175,39 €	36.883,70 €
	Form of Partnership with Industry Partners (Please Briefly Explain)	Training courses for local Governmental employees and local civil communities - mainly IT courses, some	Training courses for local Governmental employees and local civil communities - mainly IT courses, as well as, some	Training courses for local Governmental and private sector employees (IT skills and languages).	Consultations and research projects in pharmaceuticals, environmental products, and agriculture.	Training courses for local communities - mainly IT courses.	Training courses for local communities (IT and education courses).	Training courses for local Community & for students

	consultations)	vocational training courses (e.g. Tourist guidance).						
Contract Policies	National IPR Law is applicable	National IPR Law is applicable	National IPR Law is applicable	National IPR Law is applicable	National IPR Law is applicable	National IPR Law is applicable	National IPR Law is applicable	National IPR Law is applicable
Please describe the IPR policies your university follows when working with external partners in R&D								
Please describe product or IPR valorization policies (how is IPR marketed and sold at your university)	NA	NA	NA	NA	NA	NA	NA	NA
No. of Patents owned by the university	NA	NA	NA	NA	NA	NA	NA	NA
Annual Revenues from marketing Patents or other IPR	0	0	0	0	0	0	0	0
Does your institution have a dedicated IP management unit/office?	NA	NA	NA	NA	NA	NA	NA	NA
In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	NA	NA	NA	NA	NA	NA	NA	NA

2.3.2. HEIs in Lebanon

LEBANON						
		University 1	University 2	University 3	University 4	University 5
Funding Sources	Private [%]	0%	100%	100%	100%	100%
	Public [%]	100%	0%	0%	0%	0%
	Tuitions [Overall and Percentage of total Budget]	9 Million EUR, 8% of total budget	93%	40%	85%	100%
	Donations	Only from international partnerships	7%	8%	5%	0%
	Through Projects (incl. Funding and Company/Private)	NA	0%	2%	7%	0%
	Sponsoring	NA	0%	10%	3%	0%
	Others (please Specify)	State funding	7%(Investments (Dorms, Cafeteria)	40% from Medical Centre		0
Organizational Structure, Norms and Regulations	Legal Form of the Institution	Public with autonomy	Lebanese philanthropist group named “Wakf Al Bir Wal Ihasan”	University	Partnership with shares	PRIVATE UNIVERSITY
	Total Number of Employees	6542	1563	4000	99	1500
	Average Expenditure per Student per year	1.500 €	3.000 €	13.871 €	1.650 €	1.874 €
	Average study time to complete bachelor level or equivalent	3 years	4 years	3,5	3 years	3 YEARS
	Average study time to complete master level or equivalent	5 years	3 years	2	2 years	2 YEARS
	Average Percentage of Spending on Administration in HEI	25%	23%	48%	15%	15%
	Average Percentage of Spending on Research in HEI	3%	5%	2%	2%	5%
Average Percentage of Spending on Teaching in HEI	60%	45%	48%	50%	70%	

<p>Please describe shortly the internal procedure for budgeting at your institution.</p>	<p>Allocated within the government budget</p>	<p>Each Department create his own budget and send it to the Finance department, Finance Department consolidate the Budget and provide it to the president for adjustment and later to the board of trustees for approval.</p>	<p>The day-to-day operations of the university are primarily funded through unrestricted funds, and each year the Board of Trustees approves this funding through the annual Operating Budget. Restricted funds are dealt with separately by the Office of Grants and Contracts and the Office of the Comptroller. The Draft Operating Budget is first presented to the Board at its June meeting and approved in its final form in September of each year. The timing of this process and approximate deadlines for budget submissions are detailed in the budget calendar. The Operating Budget is ultimately approved each year by the Board of Trustees upon the recommendation of the university's Budget Committee. Prior to the committee's final recommendation, deans and other area managers work with senior administration to arrive at the best allocation of available resources within the realm of operations. The Office of Financial Planning and Budget works with those deans and area managers to</p>	<p>conduct a needs assessment study, conduct an analysis of the info, identify sources of funding, matching sources of funding to identified activities, allocate funds, submit budget to finance department</p>	<p>ANNUAL BUDGETS ARE PRESENTED BY EACH SCHOOL AND DEPARTMENT TO BE APPROVED BY UNIEVRSITY COUNCIL</p>
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assist them in this goal.

How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organogram of the Organization or Role and Responsibility descriptions of Key Personnel)?	President, Council of the University, Deans, Directors	Board of Trustees, President, University Council, Secretary General	see appendix 2 – Organograms – LB3	Board of Trustees (appoint, support, and assess the performance of the university President, approve long-range plans) University Council (responsible for the organization of teaching and research - keep under review the university's strategic plans) President (executive head of the university with full responsibility over the administration of all affairs and operations of the university)	see appendix 2 – Organograms – LB5
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Accountancy and IT System	Accountancy Standard (National, IFRS, US Gapp, Other...)	National	IFRS		national	National
	Usage of IT Systems for Accountancy (YES/NO)	No	Yes	YES	yes	yes
	If Yes - Which?			Oracle	Silicon	EDS
	Is there a controlling unit/department within the Institution?	Yes	Yes	YES	yes	yes
	Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?	Diwan el Mouhasaba	Yes	YES	external auditing company	External auditor company
	Budget Cycle Time	Fiscal year	Yearly	One year	planning a budget is an annual task, where the past year's budget is reviewed and budget projections are made for the next three	1 year

University - Industry Corporation	Number of Partners in the Industry	NA		30 (only consulting and training)	3 (consulting and training)
	Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.)	Very low		337.407 € (providing training and consulting services)	0
	Form of Partnership with Industry Partners (Please Briefly Explain)	Some partnerships established when Professional Masters have been launched	The Centre for Consultation creates a link between the university and all sectors within the Lebanese community (Technical and Academic Consultations, Specialized Training Courses, Laboratory Testing and Experimentation)		We provide services in exchange of working opportunities for our students.
Contract Policies	Please describe the IPR policies your university follows when working with external partners in R&D		IPR policy document with all relevant information about ownership of inventions, trademarks, licensing, reporting and disclosure forms. The university counts also with a Technology Transfer Advisory Committee for helping on evaluation of patentability potential of the invention, IP protection action, waiver requests, policy amendments, ownership of inventions, and any other matters as necessary.	n/a	
	Please describe product or IPR valorization policies (how is IPR marketed and sold at your university)			n/a	
	No. of Patents owned by the university			0	None
	Annual Revenues from marketing Patents or other			0	None

IPR			
Does your institution have a dedicated IP management unit/office?	Office of Grants and Contracts	no	No
In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?		The university shall be the owner, with the creators specially stated as inventors for all the intellectual property inventions, software designs and specimens created by the creators who include faculty members, research scholars, students and those who make use of the resources of the University. The Inventions created by University's personnel, without using University's resources and created outside their assigned/normal duties/areas of research /teaching shall be owned by the creators and the revenue generated out of such creations shall be shared in the ratio of 75:25 between the creator and the University respectively.	None at this time

2.3.3. HEIs in Palestine

PALESTINE		University 1	University 2	University 3	University 4	University 5
Funding Sources	Private [%]					
	Public [%]	16,00%	8,00%	35,00%	0,00%	8,00%
	Tuitions [Overall and Percentage of total Budget]	71,50%	34,00%	40,00%	61,00%	80,00%
	Donations	0,00%	20,00%		37,00%	
	Through Projects (incl. Funding and Company/Private)	5,00%	34,00%	20,00%	2,00%	2,50%
	Sponsoring	0,00%	3,00%	0,00%	No	No
	Others (please Specify)	7,50%	1,00%	5,00%	No	9,5%
Organizational Structure, Norms and Regulations	Legal Form of the Institution	NGO	NGOs	Governmental institution-state	NGO's	NGO - Public not State
	Total Number of Employees	417 Full Time	355	226 Employees	1020 Employee	1385
	Average Expenditure per Student per year	1.391 €	2.700 €	1050 €	1372 €	1.528 €
	Average study time to complete bachelor level or equivalent	4 years	4 years	4 years	4 years (8 Semesters)	4 Years
	Average study time to complete master level or equivalent	2 years	2 years	No	2 Years (4 Semesters)	2 Years
	Average Percentage of Spending on Administration in HEI	32,50%	65,0%	47,20%	29,78%	33,0%
	Average Percentage of Spending on Research in HEI	1,50%	8,0%	5,00%	0,26%	3,0%
	Average Percentage of Spending on Teaching in HEI	66,00%	27,0%	26,60%	69,96%	64,0%
Please describe shortly the internal procedure for budgeting at your institution.	Each division & department defines its needs of staff, equipment, furniture & other activities &	1. The Vice president for finances prepares the budget template. 2. Sends out the budget template to the	The procedures for preparing the budget starts on the mid of May every year. It consists of two different reports,	1- Forming the budget committee. 2- Sending tables to colleagues & departments to forecast their expenses	The University budget process begins in April of each year, and ends in September, with the new fiscal year beginning in	

	material such as trainings & stationary, the administrative vice president office cumulates the budget & allocates the budget for the best utilization available according to prioritizing needs.	departments (Deans/Chairpersons...etc.) 3. Department in Charge prepares the budget for the coming year . 4. Propose budget is submitted to the office of the Vice President for Finances for review & approval. 5. Sends the approved budget to the department heads & retains a copy for the finance office to follow up expenditures according to the budget line items.	namely, Revenues, expenses & other related annexes. The budget is discussed later by the council of the university. Upon approval, the advisory council reviews it before One month of the new academic year. Final decision for the budget is approved by the Ministry.	& revenues. 3- Send this estimation to the budget committee. 4- Discussions for this estimation with the deans or directors of colleges or departments 5- Then collect these numbers for each college or department. 6- Prepare a first draft of budget & approve it from the Budget committee. 7- Send the draft to the university council for approval. 8- After approving the budget from the university council we send it to the Board of trustees. 9- Approving the budget from the Board of trustees.	October. In July, initial discussions and revisions are carried out by the CFO (Chief Financial Officer) with the heads of faculties and departments. In August, the financial department submits a final draft to the Budget Committee- Board of Trustees in order to review, discuss, and prioritize the university's budget.	
	How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organogram of the Organization or Role and Responsibility descriptions of Key Personnel)?	This Uni is affiliated to the University Graduates Union (a charitable society) as the elected board of this Uni is the board of trustees of PPU. The head of University (president) has three vice presidents that supervise & administer all activities of the Uni. See appendix 2 - PS1 University.	See appendix 2 - PS2 University	Responsibilities of the president, Council of the deans, Council of the university, & the advisory council (See appendix 2 - PS3 University).	Sending tables to colleagues & departments to forecast their expenses & revenues.	See appendix 2 - PS5 University
Accountancy and IT System	Accountancy Standard (National, IFRS, US Gapp, Other...)	National	Accountancy Standard IFRS	IFRS	GAAP + IAS	IFRS
	Usage of IT Systems for Accountancy (YES/NO) If Yes - Which?	yes Bisan enterprise System	Yes, the University uses an IT for accountancy BISAN Enterprise	Yes, many systems are used; namely, Al Aseel accounting program (for general accounting) & a	Yes Oracle & Assel for Accounting	Yes Oracle

				designed program by Oracle for students.		
	Is there a controlling unit/department within the Institution?	yes	We have an Internal control measures done within the University & the Finance Office but we do not have a separate office who takes care as controlling unit/department	Yes, there is an internal auditing section in the university	Yes	Yes
	Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?	external auditor	Yes, we have an external auditor	There are two types of external monitoring; namely, financial monitoring unit in the ministry of education & higher education, & monitoring by the administrative & financial monitoring unit in the Palestinian National Authority.	External auditing company	External Auditors Comp. + General Acc. Office
	Budget Cycle Time	Jan.1-Dec.31	Sep.1 -August 31	Sep.1 -August 31	Sep.1 -August 31	Oct.1-Sept.30
University - Industry Corporation	Number of Partners in the Industry	4	NONE	No	No	yes
	Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.)				No	€1.243.700
	Form of Partnership with Industry Partners (Please Briefly Explain)	1. Cooperation in training for engineers & technicians. 2. Employing the concept of R&D as a need for all sides. 3. Technical consultations as a real problem solving measures. 4. Students graduation projects oriented to industry. 5. Local market needs assessments & curricula development according to their needs. 6. MOU's			No	None

	signed to insure formal flow of experience & knowledge. 7. Opening cooperation channels among different industrial - Academic – Governmental associations (Triple relation). 8. Increasing the rate of employment among students of multiple majors.			
Contract Policies	Please describe the IPR policies your university follows when working with external partners in R&D	In process	No	In Process
	Please describe product or IPR valorization policies (how is IPR marketed and sold at your university)		No	
	No. of Patents owned by the university		No	
	Annual Revenues from marketing Patents or other IPR		No	0
	Does you institution have a dedicated IP management unit/office?		No	Under establishment (starting forecasted from Sep. 2011)
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?		No	

2.3.4. HEIs in Syria

SYRIA		University 1	University 2	University 3	University 4
Funding Sources	Private [%]	0%	0%	100%	100%
	Public [%]	100%	100%	0%	0%
	Tuitions [Overall and Percentage of total Budget]	84%	84%	100%	100%
	Donations	0%	0%	0%	0%
	Through Projects (incl. Funding and Company/Private)	not available	0%	not available	not available
	Sponsoring	0%	0%	0%	10%
	Others (please Specify)	not available	0%	not available	not available
Organizational Structure, Norms and Regulations	Legal Form of the Institution	government	government	private	private
	Total Number of Employees	5000 /6000	5000 /6000	75	150
	Average Expenditure per Student per year	€ 1.000,00	€ 1.000,00	€ 5.000,00	€ 15.000,00
	Average study time to complete bachelor level or equivalent	5	5	4	4
	Average study time to complete master level or equivalent	4	4	no superior study	2
	Average Percentage of Spending on Administration in HEI	not available	30%	30%	30%
	Average Percentage of Spending on Research in HEI	not available	2%	10%	10%
	Average Percentage of Spending on Teaching in HEI	not available	40%	30%	40%
	Please describe shortly the internal procedure for budgeting at your institution.	university does not participate in budgeting, staff of minister of finance do it	university does not participate in budgeting, staff of minister of finance do it	directed by board of trustees	directed by board of trustees
	How is the Organization Structured (Rector, Academic Senate, Board of Directors, etc.) (If available please attach an Organogram of the Organization or Role and Responsibility descriptions of Key Personnel)?	Rector, Vice rectors, university councils, Faculty councils, Department councils.	Rector, Vice rectors, university councils, Faculty councils, Department councils.	owner board-board of trustees-rector-university council-dean-boards of college-boards of departments	owner board-board of trustees-rector-university council-dean-boards of college-boards of departments

Accountancy and IT System	Accountancy Standard (National, IFRS, US Gapp, Other...)	Syrian accounting uniform system	Syrian accounting uniform system	Syrian accounting uniform system	Syrian accounting uniform system
	Usage of IT Systems for Accountancy (YES/NO)	no	no	no	no
	If Yes - Which?				
	Is there a controlling unit/department within the Institution?	yes	yes	yes	yes
	Is there a financial controlling system coming from outside the institution in place (court of auditors, external auditing company, etc.)?	government auditing controlling organization	government auditing controlling organization	government auditing controlling organization	government auditing controlling organization
	Budget Cycle Time	Yearly	Yearly	one year	one year
University - Industry Corporation	Number of Partners in the Industry	none	none	none	none
	Annual Revenues from Industry cooperation (R&D contracts, consulting, trainings, etc.)	Limited	Limited	not available	not available
	Form of Partnership with Industry Partners (Please Briefly Explain)	Limited	Limited	not available	not available
Contract Policies	Please describe the IPR policies your university follows when working with external partners in R&D				
	Please describe product or IPR valorization policies (how is IPR marketed and sold at your university)				
	No. of Patents owned by the university				
	Annual Revenues from marketing Patents or other IPR	not available	not available	not available	not available
	Does your institution have a dedicated IP management unit/office?				
	In general, what type of intellectual property rights (IPR) and/or related tools and practices are used at your institution?	not available	Few	not available	not available

2.3.5. Benchmark scores – SNA countries

1. Funding Sources

1.1. Mix of sources (avoid dependency)

- (1) 1 source
- (2) 2-4 sources
- (3) More than 4 sources

2. Structure, Norms, and Regulations

2.1. Average study time Bachelor (according to bologna process)

- (1) More than 8 or less than 6
- (2) 7-8 semesters
- (3) 6 semesters

2.2. Average expenditure on Teaching

- (1) Less than 40%
- (2) 40-60%
- (3) More than 60%

2.3. Average expenditure on Research

- (1) Less than 10%
- (2) 10-20%
- (3) More than 20%

2.4. Average expenditure per student/year

- (1) Less than 2.000 €
- (2) 2.000 € to 3.500 €; more than 7.500 €
- (3) 3.500 € -7.500 €

3. Accountancy and IT Systems

3.1. Usage of IT System

- (1) No usage
- (2) Internal/own system
- (3) Sophisticated tool (SAP, oracle...)

3.2. Existence of controlling unit

- (1) No existence
- (2) *Not applicable score*
- (3) Yes

3.3. External financial controlling

- (1) No existence
- (2) *Not applicable score*
- (3) Yes

4. University Cooperation

4.1. Number of Industry partners (*ratio n. of partners / n. of employees*)

- (1) Less than 0.5
- (2) 0.5-1
- (3) Greater than 1

4.2. Annual revenue from industry cooperation (*ratio between revenue / n. of employees*)

- (1) Less than 150 €
- (2) 150 €-450 €
- (3) Greater than 450 €

2.3.6. Benchmarking analysis – SNA countries

Benchmarking overall ranking and major results at a glance:

- ✓ Lebanese universities scored 1st, 3rd, 4th, 11th and 12th;
- ✓ Jordan universities scored 5th, 8th, 13th, 16th, 17th and 19th;
- ✓ Palestine universities scored 2nd, 8th, 13th and 17th;
- ✓ Syrian universities scored 6th, 7th, 19th and 21st.
- ✓ Almost all SNA HEIs scored average with regards to the **mix of funding sources** (2-4 different sources);
- ✓ Average **expenditure per student**:
 - Range between € 2.000-7.500, however the majority scored 1 with means less than €2.000 per student;
- ✓ The **average study time** to complete a bachelor varies a lot among SNA HEIs (3-5 years)
- ✓ The majority of SNA HEIs spend between 40-60% of total budget on **teaching**, however 8 universities scored 1, which means less than 40% except Palestine that had 3 out of 5 HEIs scoring 3 (more than 60% spending)
- ✓ **Research expenditure** is very low, majority scored 1 (less than 10% of the budget);
- ✓ **IT system usage** for accountability score average in the majority, with lower figures in Syria and higher in Lebanon;
- ✓ All SNA HEIs:
 - Have a **controlling unit** (scored 3);
 - Have **external financial controlling** (scored 3).

- ✓ University-Industry cooperation – due to lack of information/numbers in this field:
 - Lebanese, Syrian and Palestine universities that presented no data in this item, scored 1 (estimate as low)
 - All Jordanian HEIs presented figures and range from 2 to 1 score.
 - One Lebanese and one Palestinian HEI provided the data and scored 3.

The SNA universities that participated in the study were ranked based on ten different indicators (described above) of varying weights. Despite of the fact that the education system in the four countries is different, it is possible to find similarities in the way the HEIs manage their finances. The highest score was achieved by a Lebanese university; the lowest by a Syrian university. However it's seen that even inside each country there are discrepancies among the universities. It can be due to the type of university (public, private, etc.) or may rely on the way it is managed. The most important indicator in the ranking process (rated according to the pairwise comparison process), falling under the category 2 (*Structure, Norms and Regulations*), is the “Average expenditure per student/year”. Within the SNA countries, there is no national trend on whether the education system of one country spends more than another one. When regarding the universities in each SNA country, one can find a full range of institutions ranging from €2,000 to €7,500. Two other important indicators that should be taken into consideration regarding the distribution of expenditures are the average expenditure on teaching and the average expenditure on research. All SNA universities spend average to low amounts on research, amounting to 20% or less. The same trend follows for average expenditure on teaching. The second most important indicator is the “existence of a controlling unit”, under the third category *Accounting and IT System*. With regard to this indicator, it can be observed that all universities fulfill the criteria. In terms of the usage of the IT System, most scores are average; however, they appear to be a slightly lower in Syria and a slightly higher in Lebanon. This could be explained by the sizes of the universities or potentially by the level of technological advancements that each university possesses. Another explanation could be the political stability of the country and their government policies, helping or hindering their access and funds for IT developments. The next most important indicator to be considered is the *Mix of sources* by which each university is funded (category 1). The great majority of participating universities across all four countries have between two and four sources, which bring a lower risk of dependency in only one funding source. *University Cooperation* (category 4) is another important category in analyzing these universities, however in the SNA countries very few data was shared about the number of industry partners. Therefore it was assumed that they are engaged in a limited number of cooperation and that improvements could be made in this area. This also refers to the category annual revenues from industry cooperation and therefore, it was again assumed to be rather low. However, two universities, one from Lebanon and one from Palestine scored 3 in this category, which shows that some cooperation is already doing and well in comparison to others universities in the same area, and could be also perceived ad best practices to be followed. Spotting trends within the micro-data has proven to be challenging as most of the universities maintain quite

varied scores within individual countries with quite similar overall scores. These discrepancies could be in part due to the level of development and lack of common structure in the SNA education systems. It would be valuable for SNA universities to create stronger connections with industry and thus increasing the position of their degree programs with regard to the labor market and promoting the employability of alumni. It would also be valuable for them to invest more into research and development in order to better their institutions and establish a stronger rapport with their neighbors and the rest of the world.

3. Comparative Analysis – EU and SNA

EU countries vs. SNA countries at a glance:

- ❖ EU: More populated (except AT)
- ❖ EU: Higher GDP per capita
- ❖ SNA: higher % of people holding an academic degree
- ❖ SNA: more HEIs in comparison to inhabitants
- ❖ EU: Lower unemployment rates (graduates and general)
- ❖ EU: Stronger focus on public universities
- ❖ SNA: Higher tuition fees
- ❖ EU: more governmental investment in HE

3.1. Comparisons in the Macro level

There are numerous contrasts between the EU and SNA countries. First of all, the EU countries, with the exception of Austria are more populated than the SNA countries in general, and also have a higher GDP per capita. The EU countries have higher numbers of inhabitants per number of higher education institutes as well, which might explain why their percentages of people holding academic degrees are generally lower than in the SNA countries, although this cannot be factually assumed. Another reason could be the differences in the education systems of the EU and SNA countries. Unlike the EU countries, the SNA countries have higher percentage of private universities. However, in all of the countries, there is a trend for the majority of the student population to attend public universities. A reason for this could be that private universities are generally more expensive. Expensive education could be a weakness for the SNA countries. Many people will not attend higher education institutes if they do not have the funds and resources to do so. The EU countries also tend to have much lower unemployment rates in general as well as for graduates than the SNA countries. Low unemployment rates work as a strength to an education system, as people will have greater incentive to study if there is likelihood of a job post-graduation. This is particularly true if the job has a higher salary than one could obtain without an academic degree, which is often the case. The EU tends to have lower tuition fees, higher government investment in the higher education system, more public universities, and although there are less people holding degrees, there are also less people unemployed. This could be explained by other parts of the government that are providing more jobs, however, regardless, the higher education system in the EU seems to be a better functioning part of the government and the economy than in the SNA countries. Cultural and political differences between the EU and SNA countries should also be taken into consideration when comparing the education systems. The SNA countries have had recent history of political instability and turmoil; therefore governments have had to place emphasis on other issues within countries.

Another important difference to take note of is that the European Union has been more effective in collaborating as an actual union than the Arab League. For example, with the Bologna Process, the European Union has managed to harmonize education systems in different countries whereas the systems of the SNA countries are much less integrative. In the greater scheme of things, beyond the education system, the strengths and weaknesses of the EU and SNA countries can be summarized as follows:

“In the EU we find: a wide variety of issues around which agreement and bargaining occur; a high degree of harmonization, mutual recognition of policies, and institutionalization; a degree of transfer of competencies to the Union; and a widespread feeling of a common identity and/or mutual obligations among the people of the Union. The same indicators are only weakly present in the Arab contexts. Closer integration is hampered by the absence of a well-embedded institutional fabric, political commitment among the governments or leaders, and a transnational business culture seeking the establishment of economies of scale. Arab integration therefore represents a form of integration that needs to develop more strongly along the above mentioned EU lines in order to reach a real integration potential” (Kirschner 2006).

It is due to these factors that the education systems of each party are so different and therefore explains the contrasts in the smaller details of the data.

3.2. Comparisons in the Micro level

There are numerous contrasts between the EU and SNA countries on a micro level as well as on the macro level. The most evident contrast is the ease of finding trends in the EU data in comparison to the SNA countries. In the EU data, there are very obvious trends from country to country; for example the average expenditure per student/year in every Austrian university is much higher than in every Spanish university. This could be due to the government regulation of education systems in the individual European countries. In the SNA countries, each country had a full range of average expenditure per student/year depending on the university. Therefore, no trend was visible; this is the same in comparing almost every category of EU countries to SNA countries. The SNA data seems scattered, whereas the EU data is organized and regulated. In correlation with the macro analysis, the EU has more evident strengths in terms of organization; this is reflected in the micro data. It can be drawn from the patterns in the data that they must have a better structure defining their budgets, IT systems, and systems for cooperation with industries. The EU countries also make use of strong partnerships with industry. These partnerships make universities more attractive for prospective students looking to begin or advance their careers after graduation as well as companies may provide valuable funding and sponsorship to the university. It is more common in the EU to have a larger mix of sources for funding in universities than in the SNA countries. A number of universities in the SNA countries have only one source which could hinder them financially from reaching their full potential. A similarity between the EU and SNA

countries is that they all have IT Systems in place. However, they are more effectively used in the EU, particularly in comparison to Syria have a controlling unit and use external financial controlling yet do not use their IT System at all. This underuse could cause inconveniences for students and detract them from attending such universities if more convenient options are available. The EU universities tend to do a better job with funding themselves stably and making themselves attractive to prospective students and industry partners. The SNA universities seem to be underfunded and underdeveloped; two issues that may or may not be linked. They should look to the EU schools for examples of systems that work and could be culturally adapted to suit their needs.

4. Conclusions & Recommendations

Having a variety of sources within the funding of a university is important for stability. In general, this indicates that universities in the EU have more stable funding than in the SNA countries. If an SNA university with just one source of funding were to lose it, for whatever reason, there would be no fall back plan, and it would lead to the demise of the institution. In terms of length for a Bachelor, the ideal length is three years. This relates to financial management in that it is a reasonable amount of time to foster students learning to industry needs and maintain partnerships with industry. If it is too long, companies could be impatient and if it is too short, students could be underprepared. The average expenditure on teaching is also important in order to compensate qualified professors while still managing the rest of the budget and keeping everyone satisfied, including students. The average expenditure on research is important as it indicates a university's drive for innovation, in the case of Italy, and it also helps foster a good reputation for the institution. A university's average expenditure per student/year is important because the more the university invests, the less the student will have to, thereby making studying more attractive. This is very important for the well-being of a country's economy as the workforce requires trained professionals to innovate, and keep things running as efficiently as possible. With respect to Accountancy and IT Systems, it is imperative that a controlling unit exists, and that IT Systems are used effectively. This demonstrates that a university is able to be financially independent and has the proper measures in place in the case of unexpected issues. It is important for IT systems to be up to date, and for those in positions of authority to have easy access within an institution. Accountancy and IT Systems are imperative to effective financial management within a university. University cooperation helps increase opportunities for university's to build strong networks and expand, while increasing revenue. Students are attracted to universities that have resources for finding employment after graduation as well as schools with well-established, good reputations. In comparing Spain and Germany, for example, Spain has very little university cooperation while Germany has a lot, and this could be associated with Germany's higher overall score and annual revenue. The same is relevant for the underdeveloped universities in the SNA countries; they have yet to realize the value of cooperation with industry. All of the aforementioned indicators have a heavy influence on financial management in higher education institutes. It can be concluded that the EU presently provides a better example of financial management than the SNA countries. However, this study has also been instrumental in pointing out strengths, weakness, and areas for improvement in both regions systems.

EU HEIs:

- ❖ ES and IT have a big room to **improve university-industry cooperation**;
- ❖ AT should **improve investments in R&D**;
- ❖ IT still need to **adapt student average time to complete a Bachelor** according to the Bologna Process;
- ❖ DE is changing the focus from spending in teaching to **spending in R&D**;

SNA HEIs:

- ❖ **Mix of funding sources** is in the right track (differentiation strategy – avoiding risk of dependency)
- ❖ Seem to **lack a common regulated** Education System in Arabic countries in contradiction with Bologna Process (time to complete Bachelor);
- ❖ **Internal and external controlling is existing**, however it is not possible to affirm/estimate how effective they are;
- ❖ Have a great room for **improving cooperation with industry and R&D investments**;
 - Better employability opportunities for graduates
 - Another source of funding (differentiation)
 - Improve University reputation
 - Marketability of innovations/patents
- ❖ Private vs. Public universities
 - Are students able to afford/have access to HE in Private Universities?
 - Especial case found with regards to Lebanon (1 Public, 43 private universities in the country)

5. References

1. AEGEE-Europe. (2012). Bologna Process.
<http://www.wg.aegee.org/ewg/bologna.htm>.
2. CIA. (2011). CIA - Central Intelligence Agency. Retrieved 07 07, 2011, from The World Factbook - Austria: <https://www.cia.gov/library/publications/the-world-factbook/geos/au.html>
3. CYD Fondation . (2009). Fundación conocimiento y desarrollo - Spain.
<http://www.fundacioncyd.org/>.
4. Edalo - Education Promotion Services. (2009-2012). Study in Europe. Retrieved 07 15, 2011, from <http://www.studyineurope.eu/study-in-austria/admission/tuition-fees>
5. FUCI - Federation of Independent Consumer Users. (2009-2010). Federación de Usuarios Consumidores Independientes. Retrieved 08 20, 2011, from <http://www.fuci.es/>
6. Fund, I. -I. (2012). Lebanon and the IMF. Retrieved 6 8, 2011, from <http://www.imf.org/external/country/lbn/index.htm>
7. Fundación Universidad ES. (2009-2010). Universidad.es. Retrieved 08 20, 2011, from http://www.universidad.es/universities/spains_universities
8. Hinton, M., Francis, G. and Holloway, J. (2000), Best practice benchmarking in the UK, *Benchmarking: An International Journal*, Vol. 7 No. 1, pp. 52-61.
9. INE - National Statistics Institute. (2011). Instituto Nacional de Estadística - Spain,
http://www.ine.es/en/welcome_en.htm.
10. Jackson, L., Lund, H. (2000). *Benchmarking for Higher Education*. Buckingham: SRHE and Open University Press
11. Jackson, N., & Lund, H. (2000). *Introduction to benchmarking*. Open University Press, Buckingham, p. 6.
12. Kirchner, E. J. (2006). *The European Union as a Model for Regional Integration: The Muslim World and Beyond*. Jean Monnet/Robert Schuman Paper Series, p. Vol.6 No.1.
13. MOHE. (2012). Palestinian Ministry of Education and Higher Education. Retrieved 5 10, 2011, from <http://www.mohe.gov.ps/default.aspx?AspxAutoDetectCookieSupport=1>

14. OECD. (2011). Economic Surveys - Austria.
15. OECD. (2011). Education at a glance. p. 211.
16. Palestinian Central Bureau of Statistics. (2012). Palestinian Central Bureau of Statistics. Retrieved 5 10, 2011, from <http://www.pcbs.gov.ps/Default.aspx?tabID=1&lang=en>
17. Price, I. (1994). “A Plain Person’s Guide to Benchmarking” in Jackson, L., Lund, H. (Eds.). (2000). Benchmarking for Higher Education. Buckingham: SRHE and Open University Press.
18. Statistik Austria. (2010). Bildung in Zahlen 2009/10 – Schlüsselindikatoren und Analysen. Statistik Austria.
19. Wirtschaftskammern Österreichs . (2011). WKO Statistical Yearbook 2011. Wirtschaftskammern Österreichs.

6. Appendix

6.1. Appendix 1 - Benchmarking tables

EU Universities - benchmarking scores

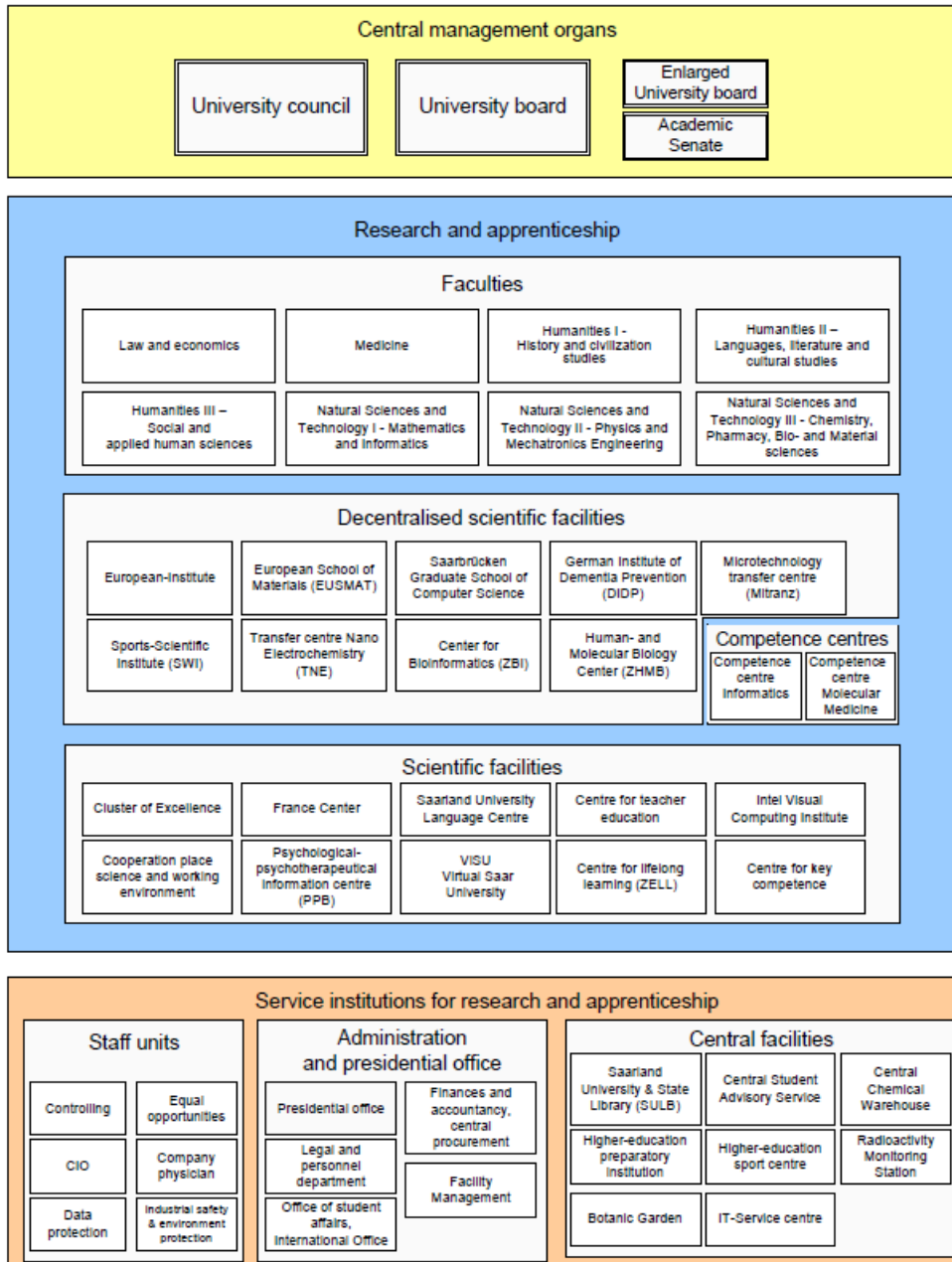
1 lowest
3 highest

Thematic group	Scores														Weight	Weighted Ranking / Scores												
	AT 1	AT 2	AT 3	AT 4	DE 1	DE 2	DE 3	DE 4	IT 1	IT 2	IT 3	SP 1	SP 2	SP 3		AT1	AT2	AT3	DE 1	DE 2	DE 3	DE 4	IT 1	IT 2	IT 3	SP 1	SP 2	SP 3
Mix of sources (avoid dependency)	2	2	3	2	3	3	3	2	2	2	2	2	2	2	13	26	26	39	39	39	39	26	26	26	26	26	26	
Structure, Norms and Regulations																												
Average study time Bachelor	3	3	3	1	2	2	2	2	1	1	1	3	3	3	4	12	12	12	8	8	8	8	4	4	4	12	12	12
Average expenditure on Teaching	3	3	3	2	1	2	2	2	1	1	1	3	3	1	12	36	36	36	12	24	24	24	12	12	12	36	36	12
Average expenditure on Research	1	1	3	1	3	2	2	2	3	3	3	2	2	2	8	8	8	24	24	16	16	16	24	24	24	16	16	16
Average expenditure per student/year	3	3	3	3	2	3	3	2	2	3	1	1	1	1	16	48	48	48	32	48	48	32	32	48	16	16	16	16
Accountancy and IT System																												
Usage of IT System	3	3	3	3	3	3	3	3	2	2	2	3	3	3	11	33	33	33	33	33	33	33	22	22	22	33	33	33
Existence of controlling unit	3	3	3	3	3	3	3	3	3	3	3	3	3	3	14	42	42	42	42	42	42	42	42	42	42	42	42	42
Usage of External financial controlling	3	3	3	3	3	3	3	3	3	3	3	3	3	3	6	18	18	18	18	18	18	18	18	18	18	18	18	18
University Cooperation																												
N. of Industry partners	1	2	2	2	1	1	3	3	1	1	1	1	1	1	7	7	14	14	7	7	21	21	7	7	7	7	7	7
Annual revenue from industry cooperation	2	1	2	2	1	2	3	3	3	2	1	1	1	1	9	18	9	18	9	18	27	27	27	18	9	9	9	9
															Overall Weighted Scored	222	220	245	185	214	237	221	188	195	154	189	189	165
															Overall Ranking	3	5	1	11	6	2	4	10	7	13	8	8	12

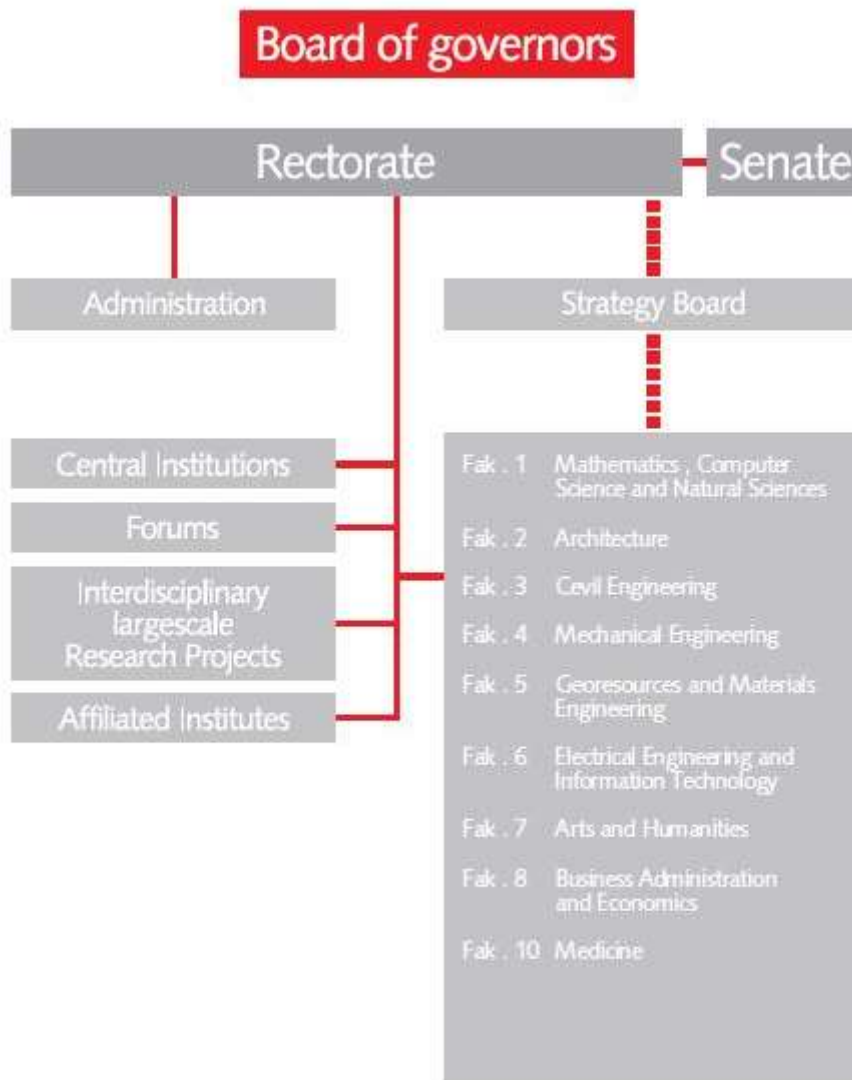
Obs.: The scores in red were developed based on average of country's score or on trends/extra data due to lack of information from some universities.

6.2. Appendix 2 - Organograms

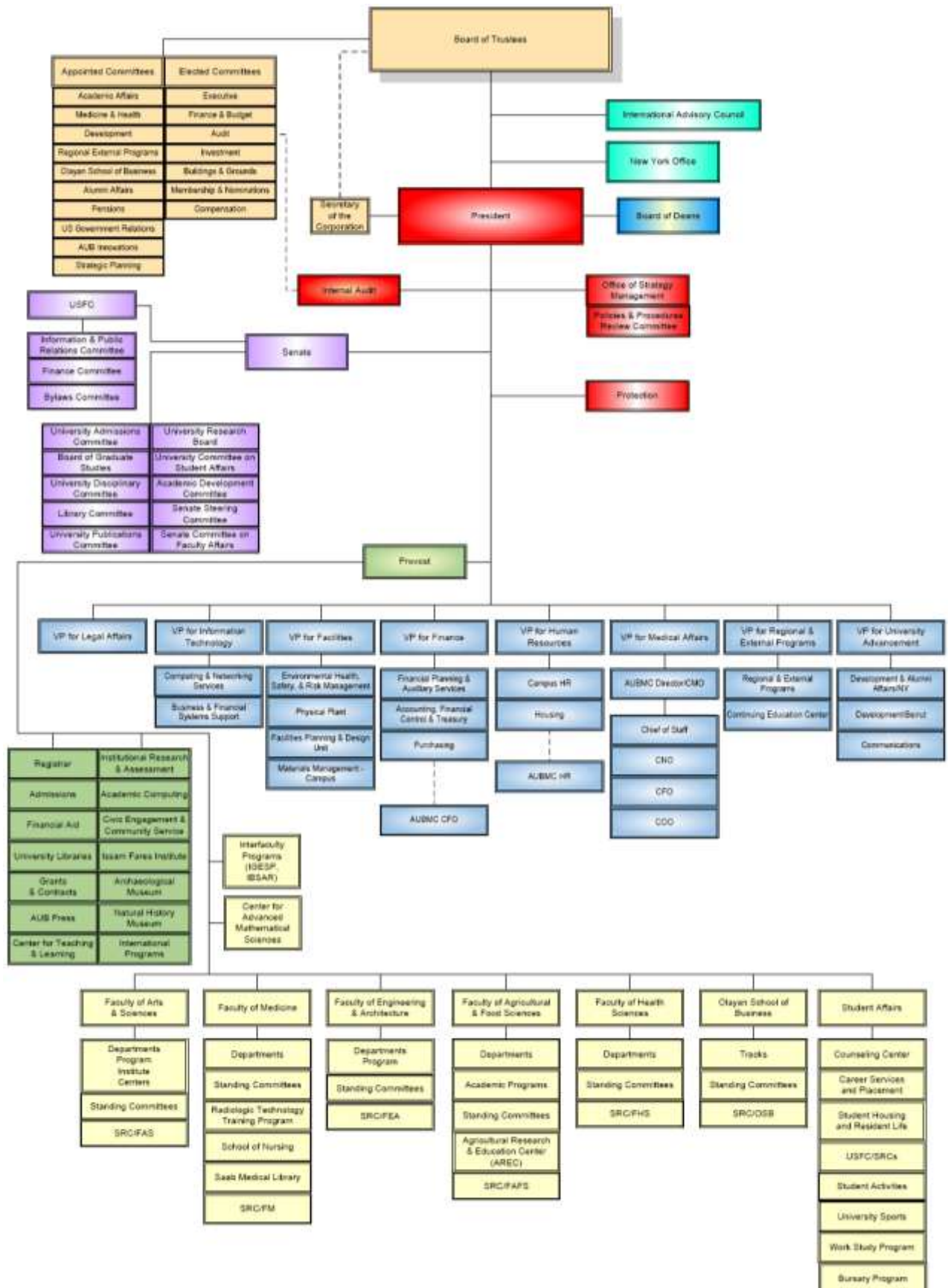
DE1 University – Germany



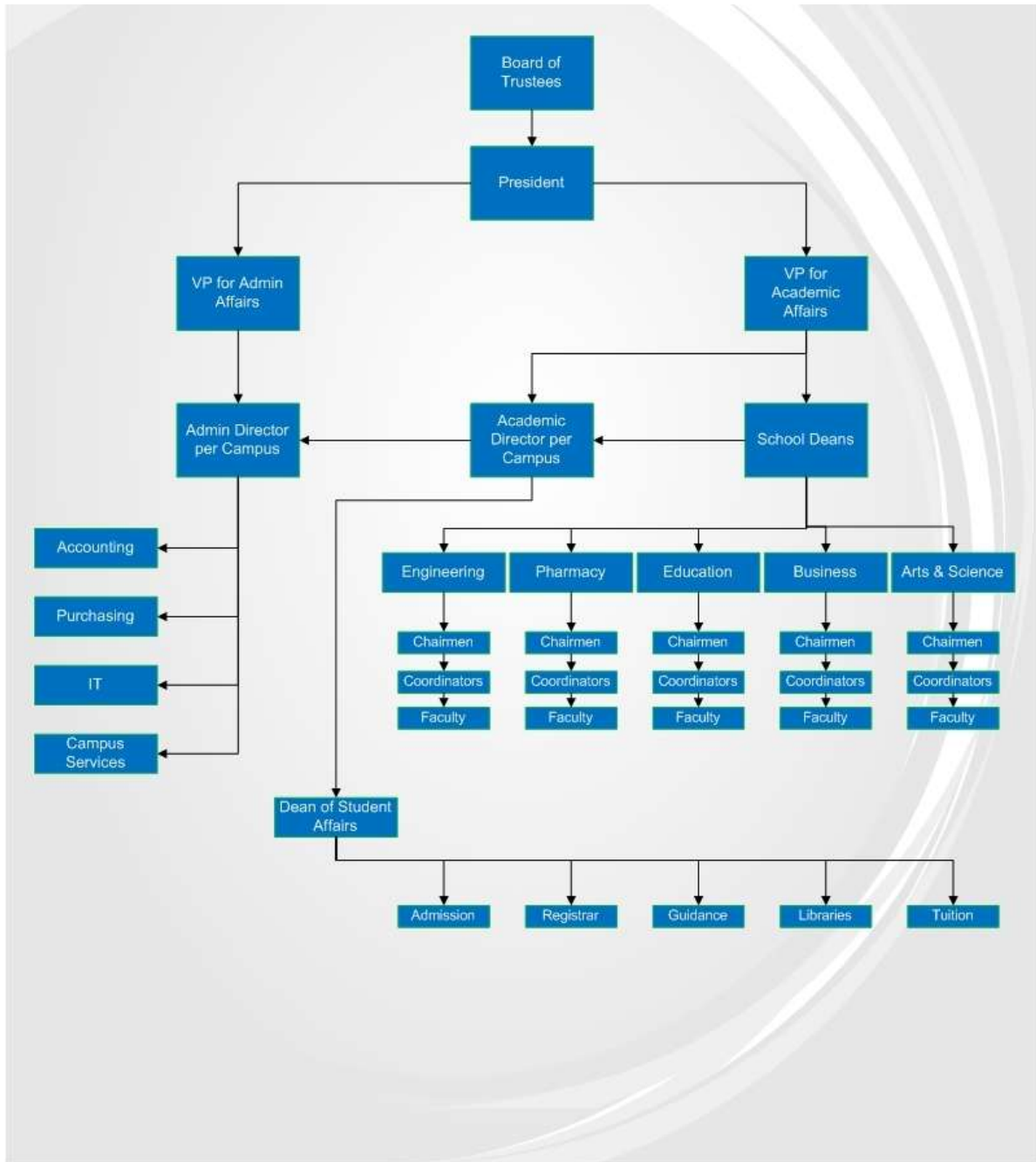
DE2 University – Germany



LB3 University – Lebanon

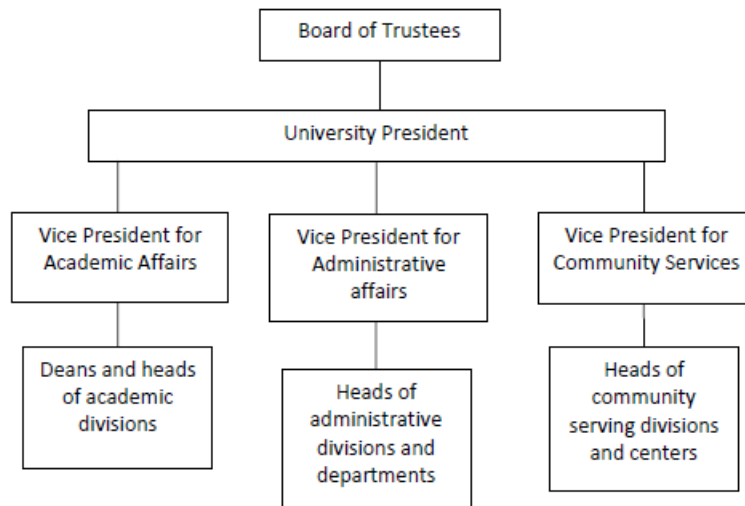


LB3 University – Lebanon

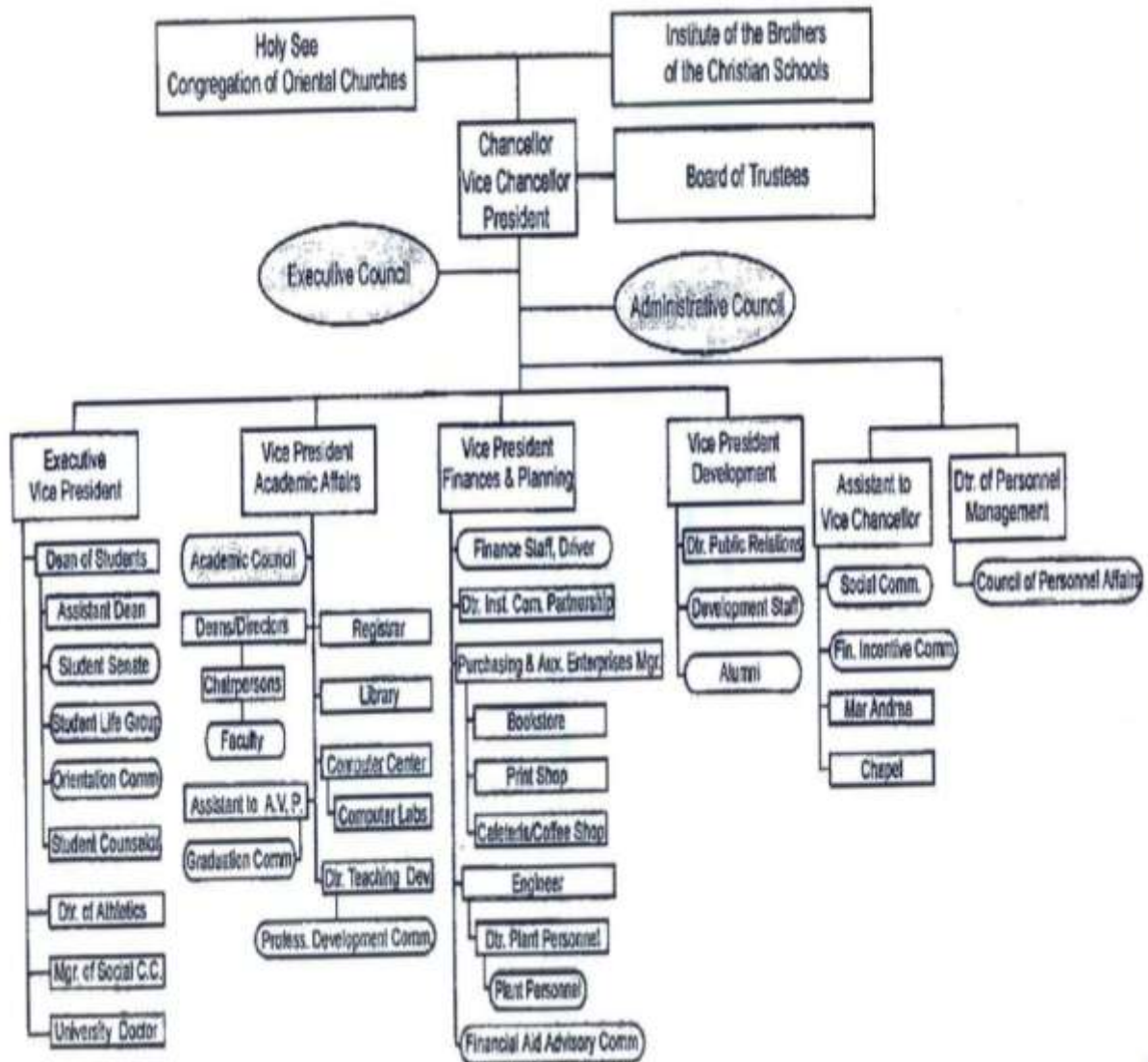


PS1 University – Palestine

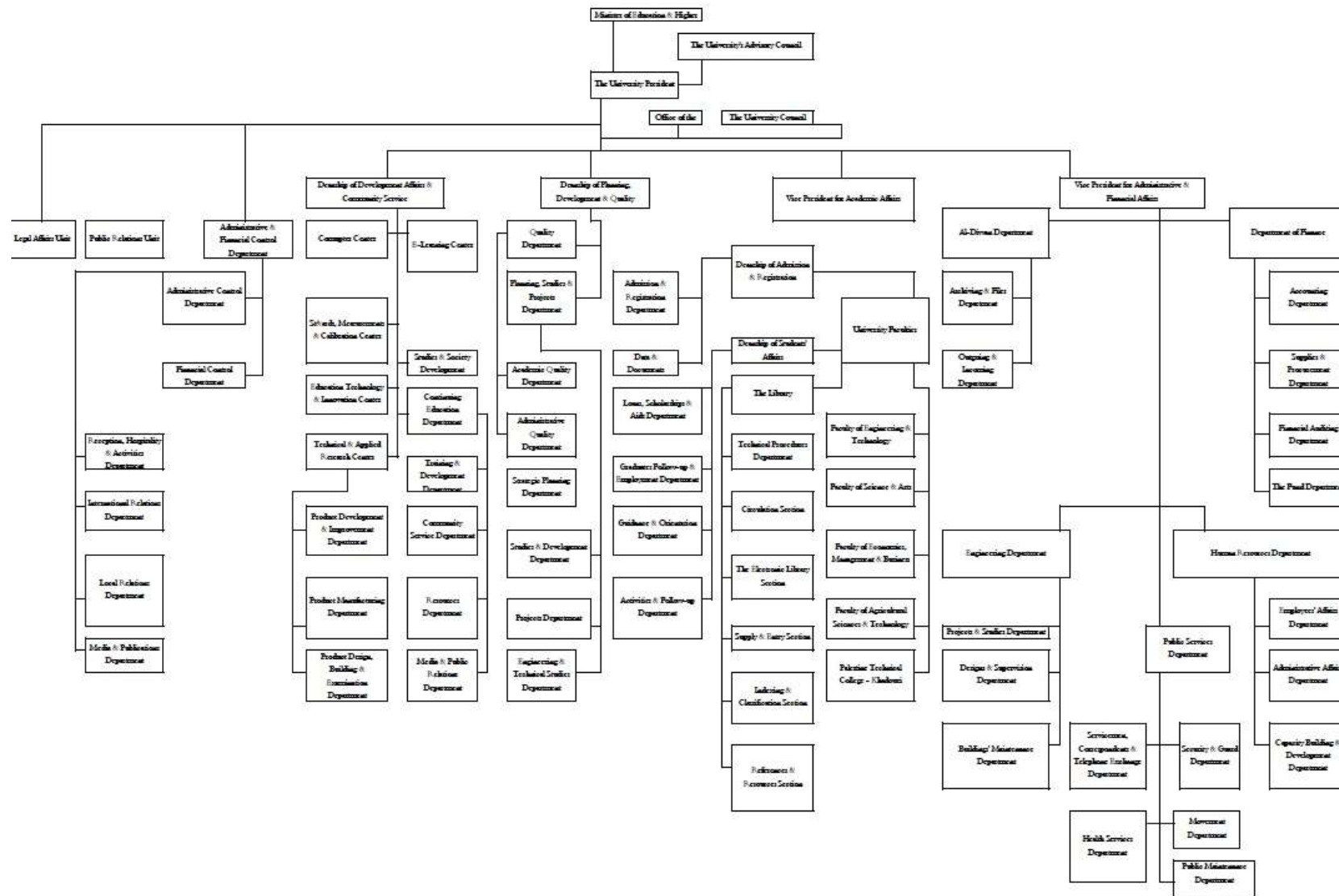
Higher administration and key personnel organizational chart



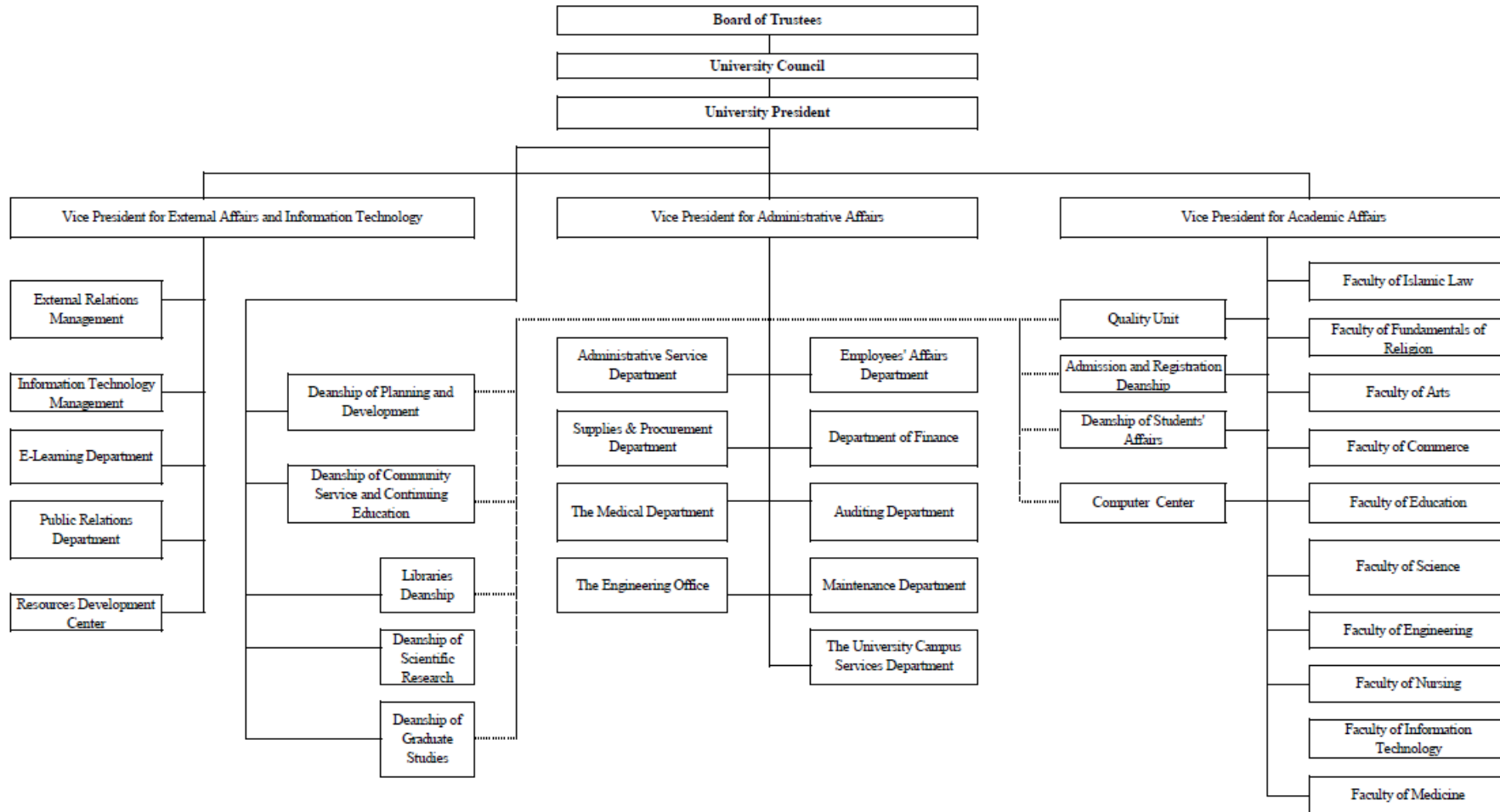
PS2 University – Palestine



PS3 University – Palestine

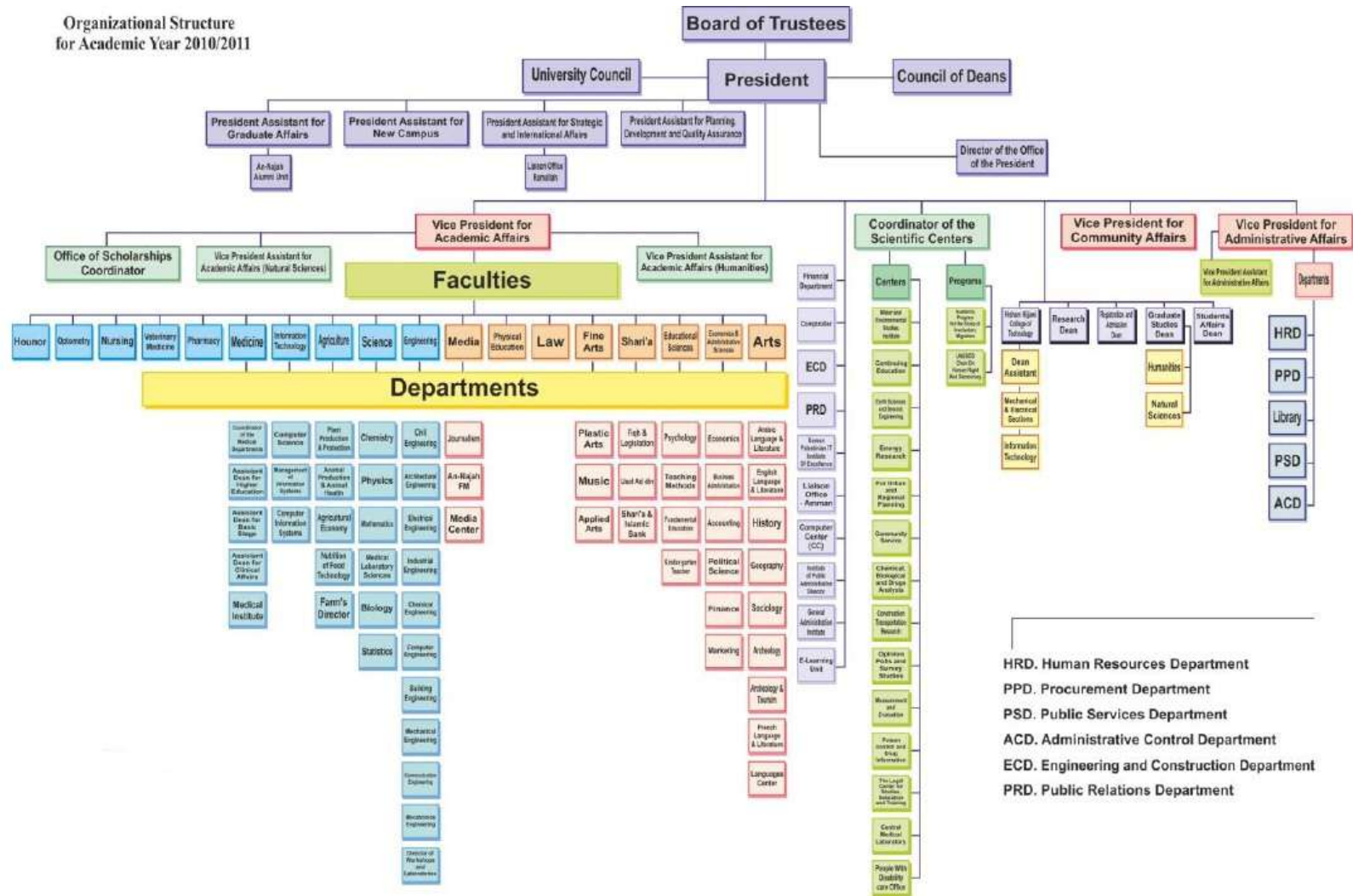


PS4 University – Palestine



PS5 University – Palestine

Organizational Structure
for Academic Year 2010/2011



HRD. Human Resources Department
 PPD. Procurement Department
 PSD. Public Services Department
 ACD. Administrative Control Department
 ECD. Engineering and Construction Department
 PRD. Public Relations Department

6.3. Appendix 3 – Pairwise Comparison sample

Pairwise comparison - UNAM

Name of your University: xxx

Your name: xxx

	Mix of funding sources	Average study time Bachelor	Average expenditure on Teaching	Average expenditure on Research	Average expenditure per student/year	Usage of IT System	Existence of controlling unit	Usage of External financial controlling	N. of Industry partners	Annual revenue from industry cooperation	N. of Patents owned
Mix of funding sources		1	1	1	1	1		1	1	1	1
Average study time Bachelor											1
Average expenditure on Teaching		1		1	1	1			1	1	1
Average expenditure on Research		1									1
Average expenditure per student/year		1		1		1			1	1	1
Usage of IT System		1									1
Existence of controlling unit	1	1	1	1	1	1		1	1	1	1
Usage of External financial controlling		1									1
N. of Industry partners		1				1		1			1
Annual revenue from industry cooperation		1				1					1
N. of Patents owned											

Instructions:

Do not fill in the black cells.

Please compare line with column and indicate "1" if line is more important than column, else leave blank.